

# STIC Search Report

EIC 1700

STIC Database Tracking Number: 218486

**TO: John Hardee**

**Location:**

**Art Unit : 1751**

**March 16, 2007**

**Case Serial Number: 10/534315**

**From: Mei Huang**

**Location: EIC 1700**

**REMSEN 4B28**

**Phone: 571/272-3952**

**Mei.huang@uspto.gov**

## Search Notes

Examiner Hardee,

Please feel free to contact me if you have any questions or if you would like to refine the search query,

Thank you for using STIC services!

Mei Huang

218486  
Access DB# 217337

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: HARDEE Examiner #: \_\_\_\_\_ Date: 2/6/07  
Art Unit: 1751 Phone Number 30 2538 Serial Number: 101534, 315  
Mail Box and Bldg/Room Location: 9A41 Results Format Preferred (circle): PAPER DISK E-MAIL 2

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_ SCIENTIFIC REFERENCE BRIEF  
Inventors (please provide full names): \_\_\_\_\_ Sci & Tech Inf - Cntr

MAR 6 RECJ

Earliest Priority Filing Date: \_\_\_\_\_ Pat. & T.M. Office

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

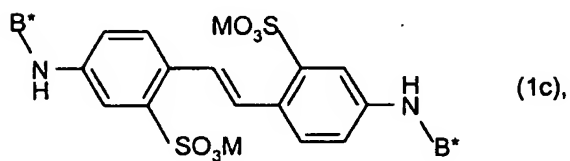
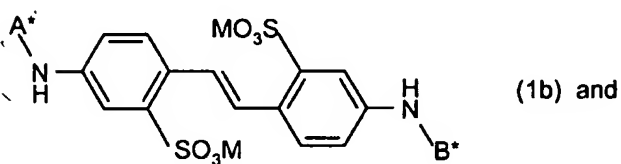
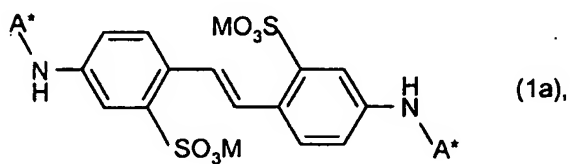
MEI HUANG DID ORIGINAL SEARCH.  
CLAIMS ARE AMENDED TO RECITE  
THE PRESENCE OF COMPOUNDS WITH  
NON-IDENTICAL END GROUPS.

Searcher: <u>MQH</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>11</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr. Link _____
Date Completed: <u>3/16/07</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

IN THE CLAIMS

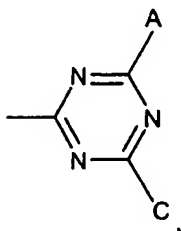
The text of all claims under examination is submitted, and the status of each is identified. This listing of claims replaces all prior versions, and listings, of claims in the application.

1.(currently amended): A fluorescent whitening agent, which comprises a mixture of compounds of the formulae



in which

A\* represents a group of the formula

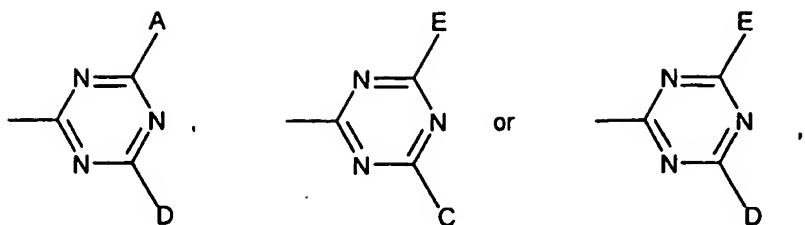


wherein

A represents  $-X-Y-NR_3R_4$  and

C is  $-NR_1R_2$  and

B\* represents a group of the formula



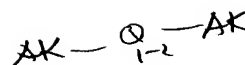
whereby the groups A\* and B\* are not identical,

wherein

D represents -NR<sub>5</sub>R<sub>6</sub> and

E represents -X<sub>1</sub>-Y<sub>1</sub>-NR<sub>7</sub>R<sub>8</sub>, whereby

X and X<sub>1</sub> each, independently of each other, represent -O- or -NH-,



Y and Y<sub>1</sub> each, independently of each other, represent a straight-chain C<sub>2</sub>-C<sub>8</sub>alkylene or branched C<sub>3</sub>-C<sub>8</sub>alkylene chain, which may be interrupted by one or two nitrogen, oxygen or sulphur atoms or represent a 5- or 6-membered cycloaliphatic ring,

R<sub>1</sub>, R<sub>2</sub>, R<sub>5</sub> and R<sub>6</sub> each independently of each other, represent hydrogen, C<sub>1</sub>-C<sub>8</sub>alkyl,

C<sub>2</sub>-C<sub>4</sub>hydroxyalkyl, C<sub>1</sub>-C<sub>4</sub>alkoxyC<sub>1</sub>-C<sub>4</sub>alkyl, phenyl, which is unsubstituted or substituted by halogen, C<sub>1</sub>-C<sub>4</sub>alkoxy, C<sub>1</sub>-C<sub>4</sub>alkyl or sulphonamido, or

R<sub>1</sub> and R<sub>2</sub> and /or R<sub>5</sub> and R<sub>6</sub>, together with the nitrogen atom to which they are attached, complete a morpholino- piperidino- or pyrrolidino-ring,

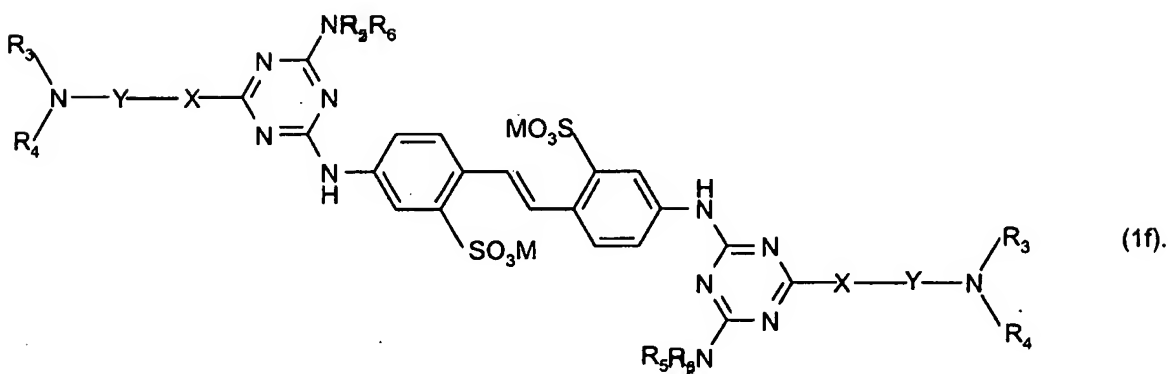
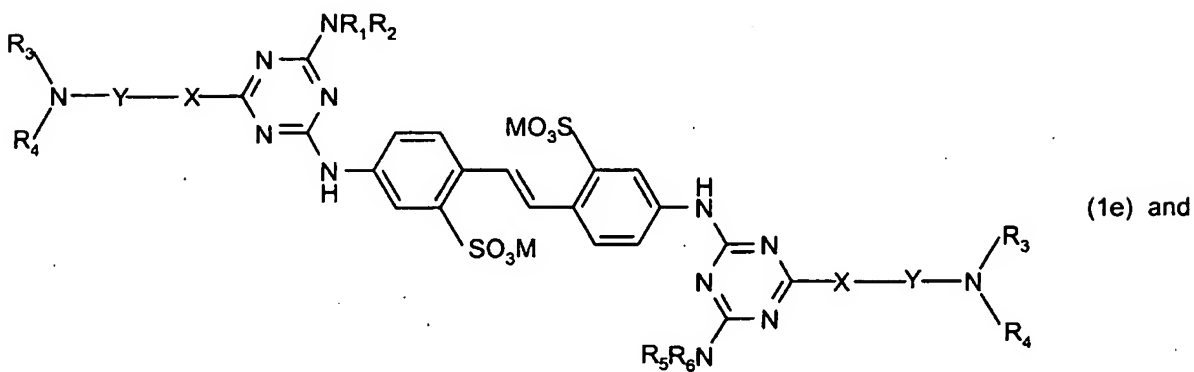
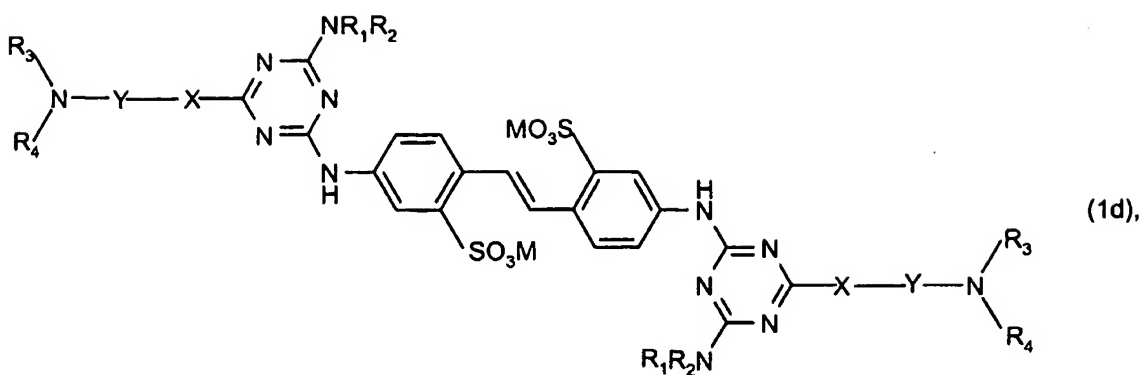
R<sub>3</sub>, R<sub>4</sub>, R<sub>7</sub> and R<sub>8</sub>, each independently of each other, represent hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl,

C<sub>2</sub>-C<sub>4</sub>hydroxyalkyl or

R<sub>3</sub> and R<sub>4</sub> and/or R<sub>7</sub> and R<sub>8</sub>, together with the nitrogen atom to which they are attached, complete a morpholino-, piperidino- or pyrrolidino-ring and

M represents hydrogen, an alkaline or alkaline earth metal, ammonium or alkylammonium.

**2. (previously presented):** A fluorescent whitening agent, according to claim 1, which comprises a mixture of compounds of the formulae



3. (previously presented): A fluorescent whitening agent, according to claim 1, which comprises a mixture of compounds of the formulae

=> fil reg

FILE 'REGISTRY' ENTERED AT 15:27:47 ON 16 MAR 2007  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2007 American Chemical Society (ACS)

=> d his nofile

(FILE 'HOME' ENTERED AT 14:11:23 ON 16 MAR 2007)

L1 FILE 'LREGISTRY' ENTERED AT 14:11:32 ON 16 MAR 2007  
STR

L2 FILE 'REGISTRY' ENTERED AT 14:13:38 ON 16 MAR 2007  
43 SEA SSS SAM L1  
L3 8670 SEA SSS FUL L1  
SAV L3 HAR315/A

L4 FILE 'LREGISTRY' ENTERED AT 14:15:01 ON 16 MAR 2007  
STR

L5 FILE 'REGISTRY' ENTERED AT 14:32:23 ON 16 MAR 2007  
STR L4  
L6 0 SEA SUB=L3 SSS SAM L5  
L7 0 SEA SUB=L3 SSS FUL L5

L8 FILE 'LREGISTRY' ENTERED AT 14:44:28 ON 16 MAR 2007  
STR L5

L9 FILE 'REGISTRY' ENTERED AT 14:48:38 ON 16 MAR 2007  
0 SEA SUB=L3 SSS SAM L8  
L10 0 SEA SUB=L3 SSS FUL L8

L11 FILE 'LREGISTRY' ENTERED AT 14:49:33 ON 16 MAR 2007  
STR L8

L12 FILE 'REGISTRY' ENTERED AT 14:51:10 ON 16 MAR 2007  
1 SEA SUB=L3 SSS SAM L11  
D SCA  
L13 48 SEA SUB=L3 SSS FUL L11  
SAV L13 HAR315S3/A  
L14 STR L8  
L15 0 SEA SUB=L3 SSS SAM L14  
L16 0 SEA SUB=L3 SSS FUL L14  
L17 STR L14  
L18 1 SEA SUB=L3 SSS SAM L17  
D SCA  
L19 40 SEA SUB=L3 SSS FUL L17  
SAV L19 HAR315S5/A  
L20 STR L5

L21 FILE 'REGISTRY' ENTERED AT 15:00:45 ON 16 MAR 2007  
0 SEA SUB=L3 SSS SAM L20  
L22 0 SEA SUB=L3 SSS FUL L20  
L23 STR L20  
L24 0 SEA SUB=L3 SSS SAM L23  
L25 10 SEA SUB=L3 SSS FUL L23  
D L25 QUE STAT  
SAV L25 HAR315S7/A

FILE 'LREGISTRY' ENTERED AT 15:07:14 ON 16 MAR 2007

L26 STR L5  
L27 STR L26

FILE 'REGISTRY' ENTERED AT 15:10:59 ON 16 MAR 2007

L28 0 SEA SUB=L3 SSS SAM L26  
L29 0 SEA SUB=L3 SSS FUL L26  
L30 0 SEA SUB=L3 SSS SAM L27  
L31 0 SEA SUB=L3 SSS FUL L27  
L32 48 SEA L13 OR L19  
D SCA  
L33 48 SEA L32 OR L25

FILE 'LREGISTRY' ENTERED AT 15:22:50 ON 16 MAR 2007

L34 STR L11

FILE 'REGISTRY' ENTERED AT 15:25:22 ON 16 MAR 2007

L35 0 SEA SSS SAM L34  
L36 0 SEA SSS FUL L34

FILE 'HCAPLUS' ENTERED AT 15:26:09 ON 16 MAR 2007

L37 10 SEA L33

=> d que stat 17

L1 STR

N~Cb~Ak~Cb~N SO3H6  
1 2 3 4 5

#### NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 2

GGCAT IS UNS AT 3

GGCAT IS UNS AT 4

DEFAULT ECLEVEL IS LIMITED

#### GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

#### STEREO ATTRIBUTES: NONE

L3 8670 SEA FILE=REGISTRY SSS FUL L1

L5 STR

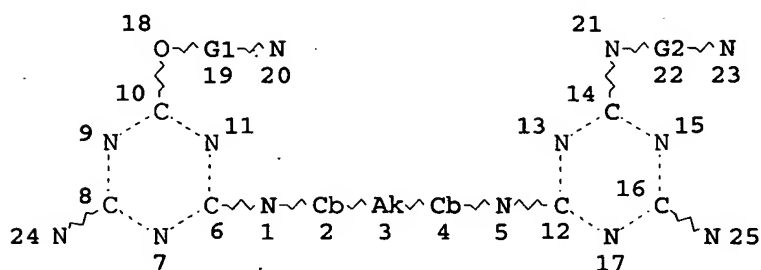
Ak @28 Cb @29

Ak~Q~Ak  
@30 31 @32Ak~Q~Q~Ak  
@33 34 35 @36

Ak @37 Cb @38

Ak~Q~Ak  
@39 40 @41Ak~Q~Q~Ak  
@42 43 44 @45

SO3H 46



VAR G1=28/29/30-18 32-20/33-18 36-20

VAR G2=37/38/39-21 41-23/42-21 45-23

NODE ATTRIBUTES:

NSPEC IS RC AT 20

NSPEC IS RC AT 23

NSPEC IS RC AT 24

NSPEC IS RC AT 25

CONNECT IS E2 RC AT 3

CONNECT IS E2 RC AT 28

CONNECT IS E2 RC AT 30

CONNECT IS E2 RC AT 32

CONNECT IS E2 RC AT 33

CONNECT IS E2 RC AT 36

CONNECT IS E2 RC AT 37

CONNECT IS E2 RC AT 39

CONNECT IS E2 RC AT 41

CONNECT IS E2 RC AT 42

CONNECT IS E2 RC AT 45

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 2

GGCAT IS UNS AT 3

GGCAT IS UNS AT 4

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 44

STEREO ATTRIBUTES: NONE

L7 0 SEA FILE=REGISTRY SUB=L3 SSS FUL L5

100.0% PROCESSED 938 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

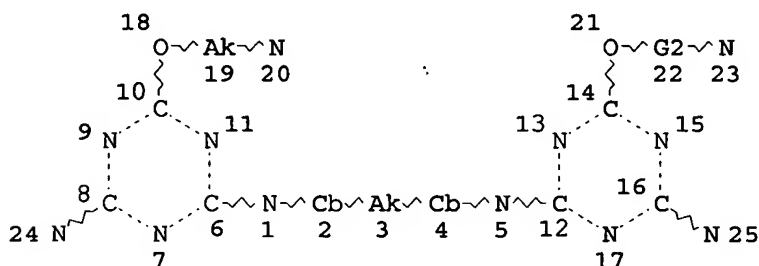
=&gt; d que stat 110

L1 STR



```
STEREO ATTRIBUTES: NONE
L3          8670 SEA FILE=REGISTRY SSS FUL L1
L8          STR
```

Cb @38      Ak~Q~Ak      Ak~Q~Q~Ak      SO3H 46  
@39 40 @41      @42 43 44 @45



VAR G2=38/39-21 41-23/42-21 45-23

```

NODE ATTRIBUTES:
NSPEC      IS RC      AT 20
NSPEC      IS RC      AT 23
NSPEC      IS RC      AT 24
NSPEC      IS RC      AT 25
CONNECT IS E2 RC AT 3
CONNECT IS E2 RC AT 19
CONNECT IS E2 RC AT 39
CONNECT IS E2 RC AT 41
CONNECT IS E2 RC AT 42
CONNECT IS E2 RC AT 45
DEFAULT MLEVEL IS ATOM
GGCAT      IS UNS AT 2
GGCAT      IS UNS AT 3
GGCAT      IS UNS AT 4
DEFAULT ECLEVEL IS LIMITED

```

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE .  
L10            0 SEA FILE=REGISTRY SUB=L3 SSS FUL L8

100.0% PROCESSED      846 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

=> d que stat l13  
L1 STR

N~Cb~Ak~Cb~N SO3H 6  
1 2 3 4 5

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
GGCAT IS UNS AT 2  
GGCAT IS UNS AT 3  
GGCAT IS UNS AT 4  
DEFAULT ECLEVEL IS LIMITED

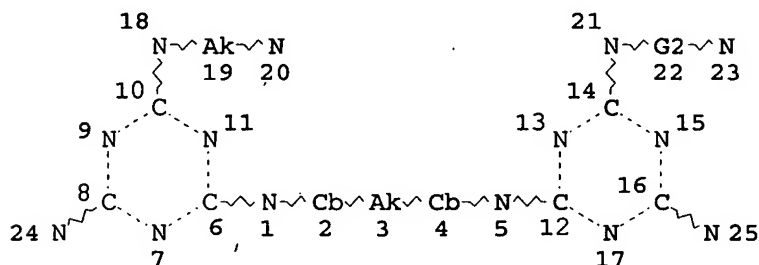
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L3 8670 SEA FILE=REGISTRY SSS FUL L1  
L11 STR

Cb@38 Ak~Q~Ak Ak~Q~Q~Ak SO3H 46  
@39 40 @41 @42 43 44 @45



VAR G2=38/39-21 41-23/42-21 45-23

NODE ATTRIBUTES:

NSPEC IS RC AT 20  
NSPEC IS RC AT 23  
NSPEC IS RC AT 24  
NSPEC IS RC AT 25  
CONNECT IS E2 RC AT 3  
CONNECT IS E2 RC AT 19  
CONNECT IS E2 RC AT 39  
CONNECT IS E2 RC AT 41  
CONNECT IS E2 RC AT 42  
CONNECT IS E2 RC AT 45  
DEFAULT MLEVEL IS ATOM  
GGCAT IS UNS AT 2  
GGCAT IS UNS AT 3  
GGCAT IS UNS AT 4  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L13 48 SEA FILE=REGISTRY SUB=L3 SSS FUL L11

100.0% PROCESSED 1692 ITERATIONS  
SEARCH TIME: 00.00.01

48 ANSWERS

=&gt; d que stat l16

L1 STR

N~Cb~Ak~Cb~N SO3H 6  
1 2 3 4 5

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 2

GGCAT IS UNS AT 3

GGCAT IS UNS AT 4

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

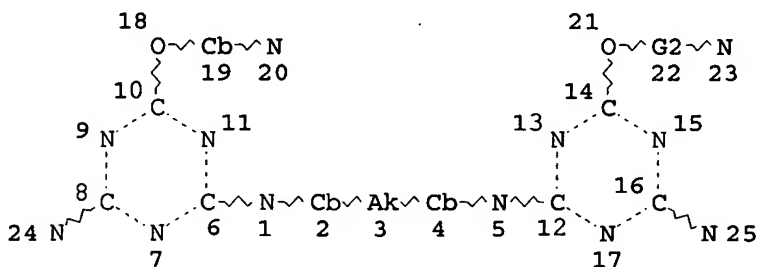
L3 8670 SEA FILE=REGISTRY SSS FUL L1

L14 STR

Ak @38

Ak~Q~Ak  
@39 40 @41Ak~Q~Q~Ak  
@42 43 44 @45

SO3H 46



VAR G2=38/39-21 41-23/42-21 45-23

NODE ATTRIBUTES:

NSPEC IS RC AT 20

NSPEC IS RC AT 23

NSPEC IS RC AT 24

NSPEC IS RC AT 25

CONNECT IS E2 RC AT 3

CONNECT IS E2 RC AT 38

CONNECT IS E2 RC AT 39

CONNECT IS E2 RC AT 41

CONNECT IS E2 RC AT 42

CONNECT IS E2 RC AT 45

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 2

GGCAT IS UNS AT 3

GGCAT IS UNS AT 4

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L16 0 SEA FILE=REGISTRY SUB=L3 SSS FUL L14

100.0% PROCESSED 846 ITERATIONS  
SEARCH TIME: 00.00.01

0 ANSWERS

=> d que stat l19

L1 STR

N~Cb~Ak~Cb~N SO3H 6  
1 2 3 4 5

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 2

GGCAT IS UNS AT 3

GGCAT IS UNS AT 4

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

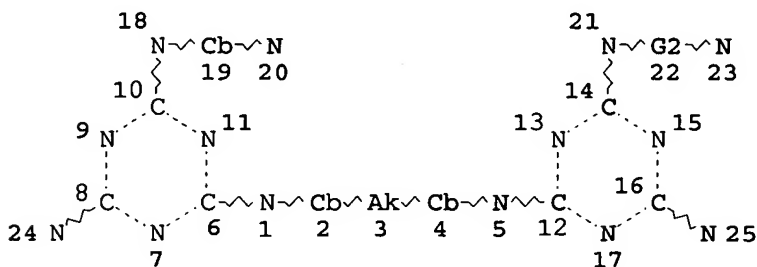
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L3 8670 SEA FILE=REGISTRY SSS FUL L1

L17 STR

Ak @38 Ak~Q~Ak Ak~Q~Q~Ak SO3H 46  
@39 40 @41 @42 43 44 @45



VAR G2=38/39-21 41-23/42-21 45-23

NODE ATTRIBUTES:

NSPEC IS RC AT 20

NSPEC IS RC AT 23

NSPEC IS RC AT 24

NSPEC IS RC AT 25

CONNECT IS E2 RC AT 3

CONNECT IS E2 RC AT 38

CONNECT IS E2 RC AT 39

CONNECT IS E2 RC AT 41

CONNECT IS E2 RC AT 42

CONNECT IS E2 RC AT 45  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 2  
 GGCAT IS UNS AT 3  
 GGCAT IS UNS AT 4  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE  
 L19 40 SEA FILE=REGISTRY SUB=L3 SSS FUL L17

100.0% PROCESSED 1692 ITERATIONS  
 SEARCH TIME: 00.00.01

40 ANSWERS

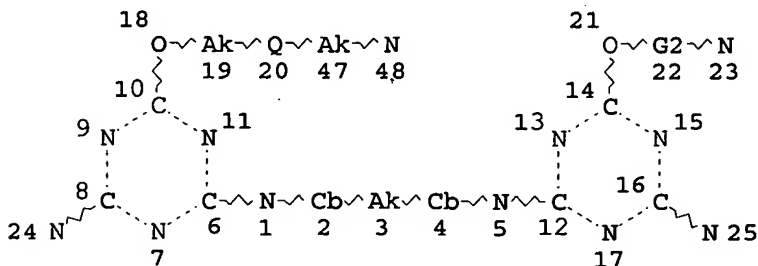
=> d que stat 122  
 L1 STR

N~Cb~Ak~Cb~N SO3H 6  
 1 2 3 4 5

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 2  
 GGCAT IS UNS AT 3  
 GGCAT IS UNS AT 4  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE  
 L3 8670 SEA FILE=REGISTRY SSS FUL L1  
 L20 STR  
 Ak @37 Cb @38 Ak~Q~Q~Ak SO3H 46  
 @42 43 44 @45



VAR G2=37/38/42-21 45-23  
 NODE ATTRIBUTES:  
 NSPEC IS RC AT 23  
 NSPEC IS RC AT 24  
 NSPEC IS RC AT 25  
 NSPEC IS RC AT 48

CONNECT IS E2 RC AT 3  
 CONNECT IS E2 RC AT 19  
 CONNECT IS E2 RC AT 37  
 CONNECT IS E2 RC AT 42  
 CONNECT IS E2 RC AT 45  
 CONNECT IS E2 RC AT 47  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 2  
 GGCAT IS UNS AT 3  
 GGCAT IS UNS AT 4  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE  
 L22 0 SEA FILE=REGISTRY SUB=L3 SSS FUL L20

100.0% PROCESSED 846 ITERATIONS  
 SEARCH TIME: 00.00.01

0 ANSWERS

=> d que stat 125

L1 STR

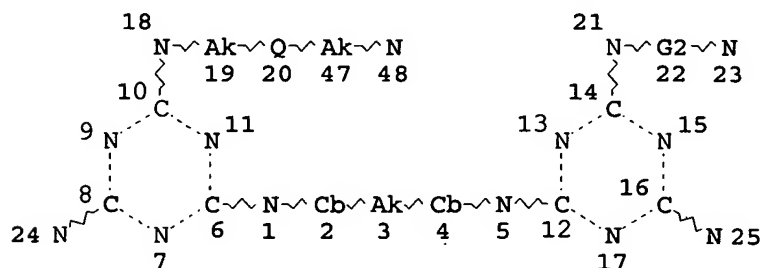
N~Cb~Ak~Cb~N SO3H 6  
 1 2 3 4 5

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 2  
 GGCAT IS UNS AT 3  
 GGCAT IS UNS AT 4  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE  
 L3 8670 SEA FILE=REGISTRY SSS FUL L1  
 L23 STR

Ak@37 Cb@38 Ak~Q~Q~Ak SO3H 46  
 @42 43 44 @45



VAR G2=37/38/42-21 45-23

## NODE ATTRIBUTES:

NSPEC IS RC AT 23  
 NSPEC IS RC AT 24  
 NSPEC IS RC AT 25  
 NSPEC IS RC AT 48  
 CONNECT IS E2 RC AT 3  
 CONNECT IS E2 RC AT 19  
 CONNECT IS E2 RC AT 37  
 CONNECT IS E2 RC AT 42  
 CONNECT IS E2 RC AT 45  
 CONNECT IS E2 RC AT 47  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 2  
 GGCAT IS UNS AT 3  
 GGCAT IS UNS AT 4  
 DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 34

## STEREO ATTRIBUTES: NONE

L25 10 SEA FILE=REGISTRY SUB=L3 SSS FUL L23

100.0% PROCESSED 1692 ITERATIONS

10 ANSWERS

SEARCH TIME: 00.00.01

=> d que stat 129

L1 STR

N~Cb~Ak~Cb~N SO3H 6  
 1 2 3 4 5

## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 2  
 GGCAT IS UNS AT 3  
 GGCAT IS UNS AT 4  
 DEFAULT ECLEVEL IS LIMITED

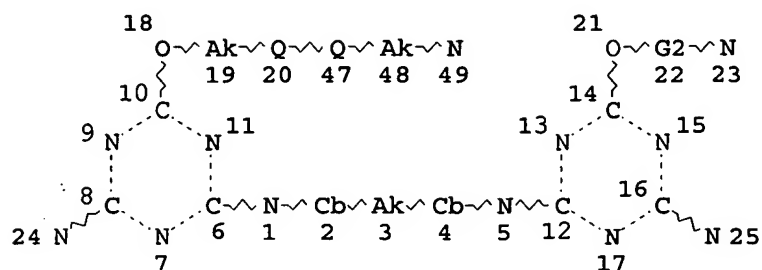
## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 6

## STEREO ATTRIBUTES: NONE

L3 8670 SEA FILE=REGISTRY SSS FUL L1  
 L26 STR

Ak @37    Cb @38    Ak~Q~Ak    SO3H 46  
                                  @39 40 @41



VAR G2=37/38/39-21 41-23

NODE ATTRIBUTES:

NSPEC    IS RC       AT    23  
 NSPEC    IS RC       AT    24  
 NSPEC    IS RC       AT    25  
 NSPEC    IS RC       AT    49  
 CONNECT IS E2    RC AT    3  
 CONNECT IS E2    RC AT    19  
 CONNECT IS E2    RC AT    37  
 CONNECT IS E2    RC AT    39  
 CONNECT IS E2    RC AT    41  
 CONNECT IS E2    RC AT    48  
 DEFAULT MLEVEL IS ATOM  
 GGCAT    IS UNS    AT    2  
 GGCAT    IS UNS    AT    3  
 GGCAT    IS UNS    AT    4  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS    34

STEREO ATTRIBUTES: NONE

L29                    0 SEA FILE=REGISTRY SUB=L3 SSS FUL L26

100.0% PROCESSED        846 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.02

=> d que stat l31

L1                    STR

N~Cb~Ak~Cb~N                    SO3H 6  
 1    2    3    4    5

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
 GGCAT    IS UNS    AT    2  
 GGCAT    IS UNS    AT    3  
 GGCAT    IS UNS    AT    4  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:



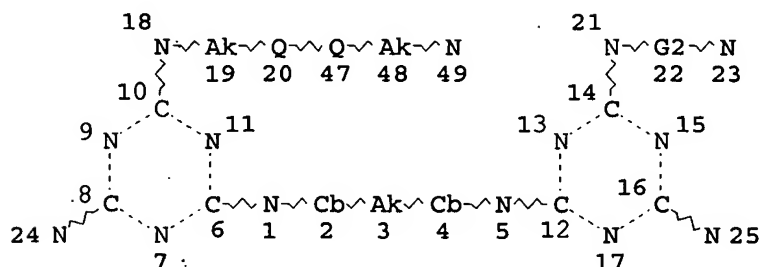
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L3 8670 SEA FILE=REGISTRY SSS FUL L1

L27 STR

Ak @37 Cb @38 Ak~Q~Ak SO3H 46  
@39 40 @41



VAR G2=37/38/39-21 41-23

NODE ATTRIBUTES:

NSPEC IS RC AT 23

NSPEC IS RC AT 24

NSPEC IS RC AT 25

NSPEC IS RC AT 49

CONNECT IS E2 RC AT 3

CONNECT IS E2 RC AT 19

CONNECT IS E2 RC AT 37

CONNECT IS E2 RC AT 39

CONNECT IS E2 RC AT 41

CONNECT IS E2 RC AT 48

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 2

GGCAT IS UNS AT 3

GGCAT IS UNS AT 4

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L31 0 SEA FILE=REGISTRY SUB=L3 SSS FUL L27

100.0% PROCESSED 1692 ITERATIONS

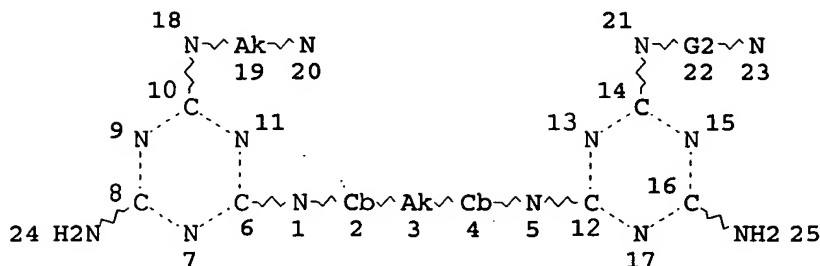
0 ANSWERS

SEARCH TIME: 00.00.01

=> d que stat l36

L34 STR

Cb @38      Ak~Q~Ak      Ak~Q~Q~Ak      SO3H 46  
              @39 40 @41      @42 43 44 @45



VAR G2=38/39-21 41-23/42-21 45-23

NODE ATTRIBUTES:

NSPEC IS RC AT 20  
 NSPEC IS RC AT 23  
 CONNECT IS E2 RC AT 3  
 CONNECT IS E2 RC AT 19  
 CONNECT IS E2 RC AT 39  
 CONNECT IS E2 RC AT 41  
 CONNECT IS E2 RC AT 42  
 CONNECT IS E2 RC AT 45  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 2  
 GGCAT IS UNS AT 3  
 GGCAT IS UNS AT 4  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L36 0 SEA FILE=REGISTRY SSS FUL L34

100.0% PROCESSED 9661 ITERATIONS  
 SEARCH TIME: 00.00.02

0 ANSWERS

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 15:29:12 ON 16 MAR 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l37 ibib abs hitstr hitind 1-10

L37 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:410059 HCAPLUS

DOCUMENT NUMBER: 144:452211

TITLE: Amphoteric 4-4'-bis(triazinylamino) stilbene-2,  
 2'-disulfonic acid derivatives as optical  
 brighteners for paper

INVENTOR(S): Scheffler, Goetz; Schlatter, Rene

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 51 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006045691	A1	20060504	WO 2005-EP55122	20051010

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: EP 2004-105184 A 20041020

OTHER SOURCE(S): MARPAT 144:452211

AB The present invention provides 4,4'-bis(triazinylamino)stilbene-2,2'-disulfonic acid derivs. and compns., a process for their preparation, aqueous formulations thereof, their use as an optical brightener for paper and to paper treated with these derivs.

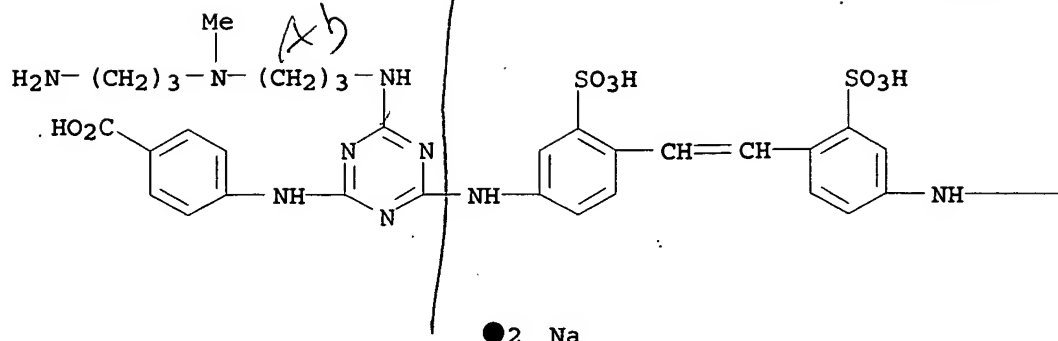
IT 885476-06-2P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use);  
 PREP (Preparation); USES (Uses)  
 (amphoteric 4-4'-bis(triazinylamino) stilbene-2, 2'-disulfonic acid derivs. as optical brighteners for paper)

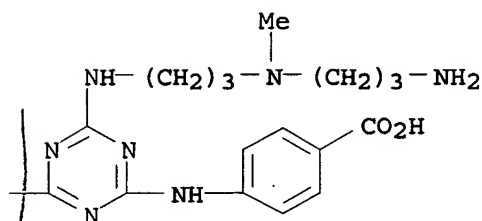
RN 885476-06-2 HCAPLUS

CN Benzoic acid, 4,4'-[1,2-ethenediylbis[(3-sulfo-4,1-phenylene)imino[6-[[3-[(3-aminopropyl)methylamino]propyl]amino]-1,3,5-triazine-4,2-diyl]]imino]bis-, disodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 41

IT 885476-04-0P 885476-05-1P 885476-06-2P 885476-07-3P  
 885476-08-4P 885476-09-5P 885476-10-8P 885476-11-9P  
 885476-12-0P 885476-13-1P 885476-14-2P 885476-15-3P  
 885476-16-4P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use);  
 PREP (Preparation); USES (Uses)

(amphoteric 4-4'-bis(triazinylamino) stilbene-2, 2'-disulfonic  
 acid derivs. as optical brighteners for paper)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L37 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:182641 HCAPLUS

DOCUMENT NUMBER: 142:263003

TITLE: Triazinylaminostilbene derivative optical  
 brighteners for fibers and paper

INVENTOR(S): Scheffler, Goetz; Rohwer, Hauke; Schlatter,  
 Rene; Hochberg, Robert

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

200408  
11

200408  
11

200408  
11

200408  
11

200408  
11

200408  
11

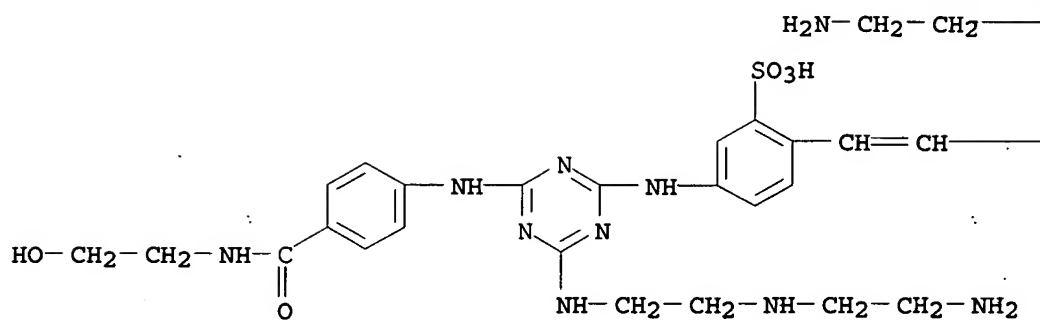
200602  
16

200308  
21

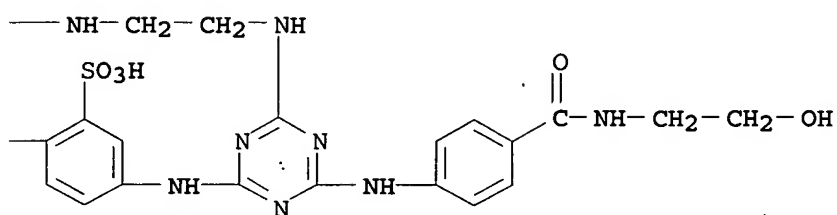
200408  
11

03/16/2007

PAGE 1-A



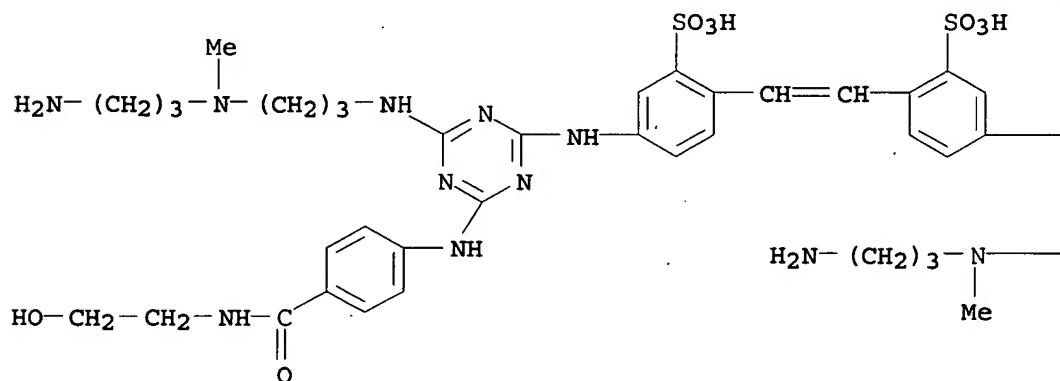
PAGE 1-B



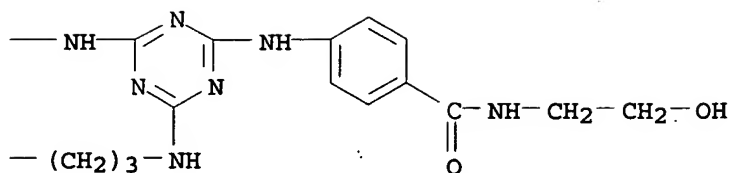
RN 845890-57-5 HCAPLUS

CN Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[[4-[[3-[(3-aminopropyl)methylamino]propyl]amino]-6-[[4-[[2-hydroxyethyl]amino]carbonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



X

IC ICM C07D251-70  
ICS C08K005-3492  
CC 40-9 (Textiles and Fibers)  
Section cross-reference(s): 43  
IT 845890-46-2P 845890-47-3P 845890-48-4P 845890-49-5P  
845890-50-8P 845890-52-0P 845890-53-1P 845890-54-2P  
845890-56-4P 845890-57-5P 845890-58-6P 845890-59-7P  
845890-60-0P 845890-61-1P 845890-62-2P 845890-63-3P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of triazinylaminostilbene derivative optical brighteners for fibers and paper)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2004:453320 HCAPLUS  
DOCUMENT NUMBER: 141:25251  
TITLE: Amphoteric fluorescent whitening agents for paper  
INVENTOR(S): Scheffler, Goetz; Rohringer, Peter; Fletcher, Ian John  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holdings Inc., Switz.  
SOURCE: PCT Int. Appl., 74 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004046293	A2	20040603	WO 2003-EP12583	20031111

WO 2004046293	A8	20040826
WO 2004046293	A3	20041014

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,  
 DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
 SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG

CA 2504256	A1	20040603	CA 2003-2504256	200311 11
AU 2003288033	A1	20040615	AU 2003-288033	200311 11
EP 1563049	A2	20050817	EP 2003-779887	200311 11
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1711348	A	20051221	CN 2003-80103529	200311 11
BR 2003016400	A	20060221	BR 2003-16400	200311 11
JP 2006506492	T	20060223	JP 2004-552569	200311 11
EP 1674616	A2	20060628	EP 2006-111552	200311 11
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
US 2006155124	A1	20060713	US 2005-534315	200505 09
PRIORITY APPLN. INFO.:			EP 2002-405998	A 200211 19
			EP 2003-779887	A3 200311 11
			WO 2003-EP12583	W 200311 11

OTHER SOURCE(S): MARPAT 141:25251  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Novel bis-triazinylaminostilbene amphoteric fluorescent whitening agents, comprising both individual components and mixts. thereof, are used as fluorescent whitening agents for the fluorescent whitening of paper. Thus, a fluorescent whitening agent comprises a mixture of compds. of the formula I, II and III in which A\* represents a group of the formula IV, wherein A represents -X-Y-NR<sub>3</sub>R<sub>4</sub> and C is



-NR1R2 and B\* represents a group of the formula V, VI and VII wherein D represents -NR5R6 and E represents -X1-Y1-NR7R8, whereby X and X1 each, independently of each other, represent -O- or -NH-, Y and Y1 each, independently of each other, represent a straight-chain C2-C8 alkylene or branched C3-C8 alkylene chain, which may be interrupted by one or two nitrogen, oxygen or sulfur atoms or represent a 5- or 6-membered cycloaliph. ring, R1, R2, R5 and R6 each independently of each other, represent hydrogen, C1-C8 alkyl, C2-C4 hydroxyalkyl, C1-C4 alkoxy C1-C4 alkyl, Ph, which is unsubstituted or substituted by halogen, C1-C4 alkoxy, CI-C4 alkyl or sulfonamido, or R1 and R2 and /or R5 and R6, together with the nitrogen atom to which they are attached, complete a morpholino-piperidino- or pyrrolidino-ring, R3, R4, R7 and R8, each independently of each other, represent hydrogen, C1-C4 alkyl, C2-C4 hydroxyalkyl or R3 and R4 and/or R7 and R8, together with the nitrogen atom to which they are attached, complete a morpholino-, piperidino- or pyrrolidino-ring and M represents hydrogen, an alkaline or alkaline earth metal, ammonium or alkylammonium. A process for their preparation and intermediates useful for their preparation are discussed.

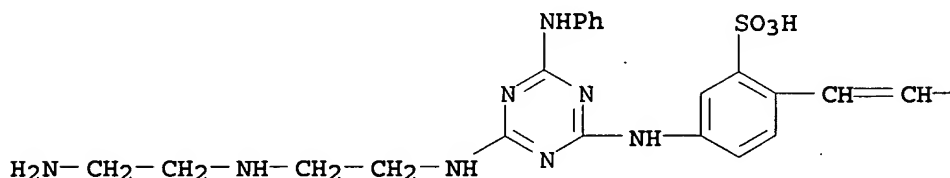
IT 697768-52-8P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(amphoteric fluorescent whitening agents for paper)

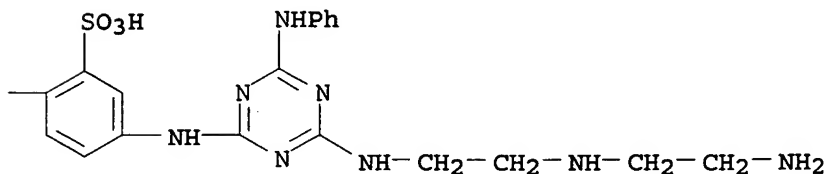
RN 697768-52-8 HCAPLUS

CN Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[[4-[[2-[(2-aminoethyl)amino]ethyl]amino]-6-(phenylamino)-1,3,5-triazin-2-yl]amino]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM C11D003-42

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

IT	697767-94-5P	697767-95-6P	697767-96-7P	697767-98-9P
	697768-00-6P	697768-04-0P	697768-06-2P	697768-09-5P
	697768-11-9P	697768-12-0P	697768-13-1P	697768-15-3P
	697768-16-4P	697768-18-6P	697768-20-0P	697768-22-2P
	697768-24-4P	697768-25-5P	697768-28-8P	697768-29-9P
	697768-30-2P	697768-31-3P	697768-33-5P	697768-34-6P
	697768-35-7P	697768-40-4P	697768-41-5P	697768-43-7P
	697768-44-8P	697768-45-9P	697768-46-0P	697768-47-1P
	697768-48-2P	697768-50-6P	697768-52-8P	697768-54-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(amphoteric fluorescent whitening agents for paper)

L37 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1999:640956 HCAPLUS  
DOCUMENT NUMBER: 131:273416  
TITLE: Water-soluble sunscreens and detergent  
compositions containing them  
INVENTOR(S): Cox, Russell Duncan; Finch, Timothy David;  
Griffiths, John; Maddison, Christopher; Wilkes,  
Ian Paul  
PATENT ASSIGNEE(S): Unilever PLC, UK; Unilever N.V.; Hindustan Lever  
Ltd.  
SOURCE: PCT Int. Appl., 33 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9950379	A1	19991007	WO 1999-EP1962	199903 23
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9935980	A	19991018	AU 1999-35980	199903 23
PRIORITY APPLN. INFO.:		GB 1998-7073	A	199804 01
		GB 1998-7074	A	199804 01
		WO 1999-EP1962	W	199903 23

OTHER SOURCE(S): MARPAT 131:273416

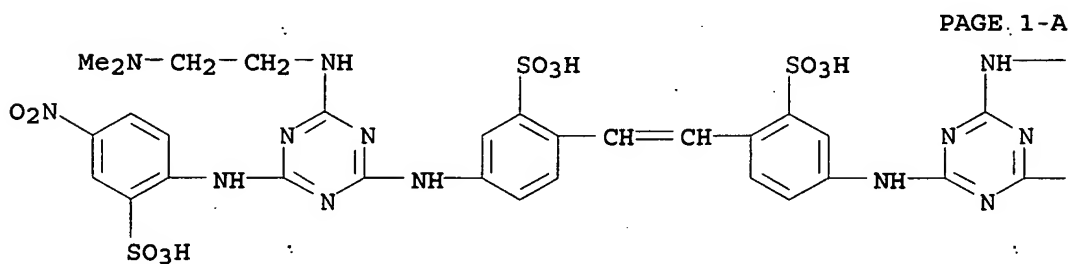
AB A sunscreen agent which is a non-dye, substantially non-fluorescent, non-quaternary ammonium compound which absorbs UVA and/or UVB radiation is incorporated ( $\geq 5\%$ , preferably  $\geq 7.5\%$ , more preferably  $\geq 10\%$ ) in a detergent and in a test deposited on a sheet of cotton-fabric by a solution of 0.2 g/L of the agent in H<sub>2</sub>O for 1 h at 21° at a solution:sheet weight ratio 25:1, (preferably followed by rinsing) and then followed by drying. A typical powdered detergent contained water 12.5, Na linear alkylbenzenesulfonate 23.6, Na tripolyphosphate 19.2, Na silicate 4.8, sunscreen 0.2, SCMC

0.4, Na sulfate 28.6, calcite 10.3, and minors 0.4%.

IT 245335-52-8  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (water-soluble sunscreens for detergents)

RN 245335-52-8 HCAPLUS

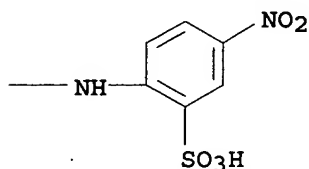
CN Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[[4-[[2-(dimethylamino)ethyl]amino]-6-[(4-nitro-2-sulfophenyl)amino]-1,3,5-triazin-2-yl]amino]-, tetrasodium salt (9CI) (CA INDEX NAME)



● 4 Na

PAGE 1-B

—CH<sub>2</sub>—CH<sub>2</sub>—NMe<sub>2</sub>



IC ICM C11D003-28

CC 46-5 (Surface Active Agents and Detergents)

IT 245335-50-6 245335-51-7 245335-52-8

RL: MOA (Modifier or additive use); USES (Uses)  
 (water-soluble sunscreens for detergents)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L37 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:171898 HCAPLUS

DOCUMENT NUMBER: 124:204938

TITLE: Anionic acid azo direct dyes, their preparation,  
 their mixtures, and their use

INVENTOR(S): Lauk, Urs

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Eur. Pat. Appl., 71 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 693538	A2	19960124	EP 1995-810387	19950612
EP 693538	A3	19960605		
EP 693538	B1	20010822		
R: BE, CH, DE, ES, FR, GB, GR, IT, LI, PT				
US 5631352	A	19970520	US 1995-460174	19950602
ES 2161847	T3	20011216	ES 1995-810387	19950612
PT 693538	T	20020130	PT 1995-810387	19950612
JP 08003469	A	19960109	JP 1995-146285	19950613
CN 1133323	A	19961016	CN 1995-107363	19950619
CN 1066178	B	20010523		
BR 9502861	A	19960604	BR 1995-2861	19950620
GR 3036651	T3	20011231	GR 2001-401509	20010918
PRIORITY APPLN. INFO.:			CH 1994-1952	A 19940620

## OTHER SOURCE(S): MARPAT 124:204938

AB Mixts. of  $\geq 1$  azo dye containing 1 or 2 aminotriazine groups with  $\geq 1$  azo dye containing 2 aminotriazine groups are direct dyes for cellulosics. They are high-temperature-stable and are especially suited for 1-bath dyeing of polyester/cotton with incorporation of a polyester disperse dye under polyester dyeing conditions. Thus, 1 mol cyanuric chloride was condensed with 2 mol 7-amino-4-hydroxy-3-(4-methoxy-2-sulfophenylazo)-2-naphthalenesulfonic acid and then with 1 mol 1,3-diaminopropane to provide an aminotriazine disazo dye which dyed cotton in fast red shades. The dye could also be combined with another azo dye for application.

IT 174571-99-4

RL: TEM (Technical or engineered material use); USES (Uses)  
(anionic acid azo direct dye mixts. for dyeing of cellulosics)

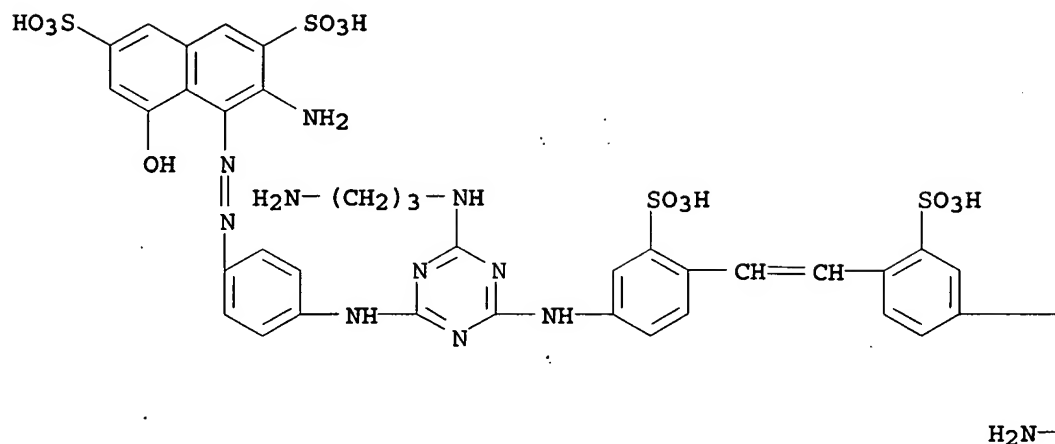
RN 174571-99-4 HCAPLUS

CN 2,7-Naphthalenedisulfonic acid, 4,4',4'',4'''-[1,3-propanediylbis(imino-1,3,5-triazine-6,2,4-triylbis(imino-4,1-phenyleneazo))]tetrakis[3-amino-5-hydroxy-, mixt. with 4,4'-[1,2-ethenediylbis[(3-sulfo-4,1-phenylene)imino[6-[(3-aminopropyl)amino]-1,3,5-triazine-4,2-diyl]imino-4,1-phenyleneazo]]bis[3-amino-5-hydroxy-2,7-naphthalenedisulfonic acid] (9CI) (CA INDEX NAME)

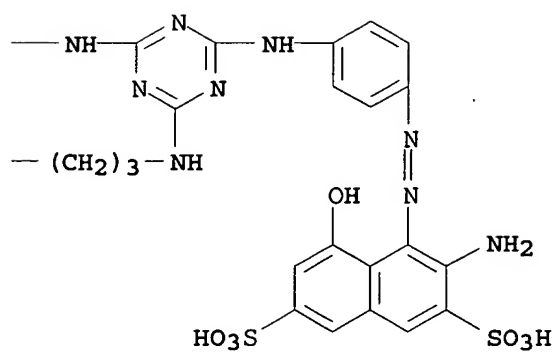
CM 1

CRN 174571-98-3  
CMF C58 H56 N20 O20 S6

PAGE 1-A



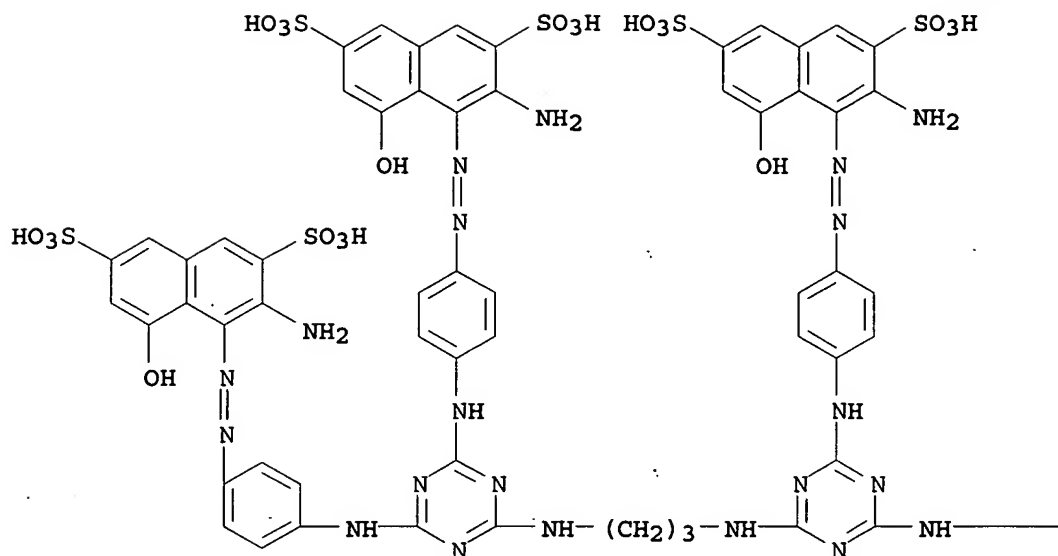
PAGE 1-B



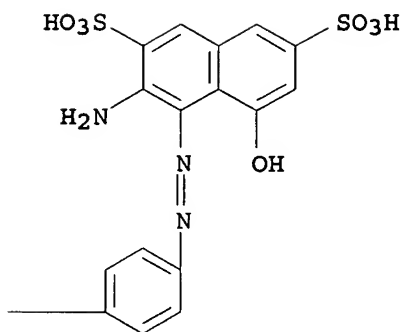
CM 2

CRN 174571-96-1  
CMF C73 H60 N24 O28 S8

PAGE 1-A



PAGE 1-B



IC ICM C09B067-22

ICS C09B043-16

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 40

IT 174571-72-3 174571-74-5 174571-76-7 174571-79-0 174571-82-5

174571-85-8 174571-88-1 174571-91-6 174571-94-9 174571-97-2

174571-99-4

RL: TEM (Technical or engineered material use); USES (Uses)

(anionic acid azo direct dye mixts. for dyeing of cellulose)

L37 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:161231 HCAPLUS

DOCUMENT NUMBER: 124:263379

TITLE: Polyazo black dyes, their preparation and their use

INVENTOR(S): Hassenrueck, Karin; Wild, Peter; Stoeher, Frank-Michael

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

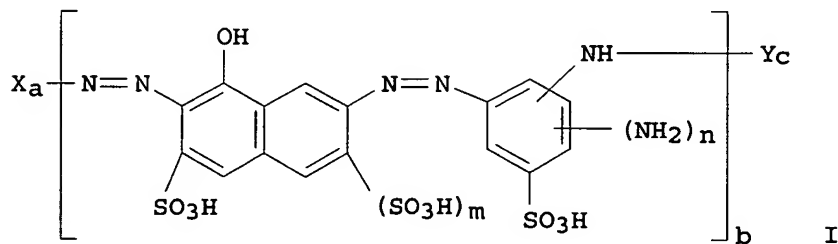
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 692523	A1	19960117	EP 1995-110132	199506 29
EP 692523 R: CH, DE, FR, GB, LI	B1	20010905		
DE 4424484	A1	19960118	DE 1994-4424484	199407 12
US 5637679	A	19970610	US 1995-471435	199506 07
JP 08053627	A	19960227	JP 1995-195700	199507 10
PRIORITY APPLN. INFO.:			DE 1994-4424484	A 199407 12

OTHER SOURCE(S): MARPAT 124:263379  
GI

AB The dyes (I; a, b, c = 1 or 2, with a + c < 4 and a + b + c = 3 or 5; m, n = 0, 1; X = optionally substituted phenylazophenyl or a divalent group; Y = substituted triazinyl or a divalent group) are obtained by condensing acid halides or halotriazines with polyazo aniline derivs. I are suitable for dyeing of cellulosics and leather and are useful for printing inks. Thus, sulfanilic acid-1-amino-7-naphthalenesulfonic acid was prepared and

IT 174630-23-0P 174661-77-9P

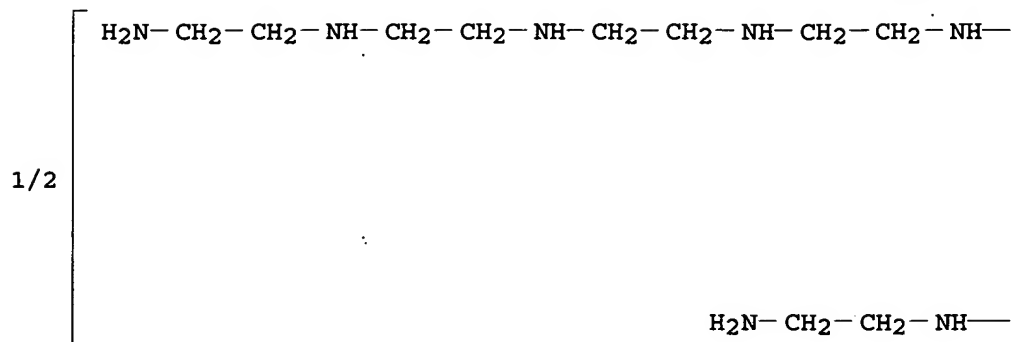
RN 174630-23-0 HCAPLUS

CN 2,7-Naphthalenedisulfonic acid, 3,3'-[1,2-ethenediylbis[(3-sulfo-4,1-phenylene) imino[6-[(14-amino-3,6,9,12-tetraazatetradec-1-yl)amino]-1,3,5-triazine-4,2-diyl] imino(amino-3-sulphophenyl)azo]]bis[5-hydroxy-6-[[7-sulfo-4-[(4-sulphophenyl)azo]-1-naphthalenyl]azo]- (9CI) (CA INDEX NAME)

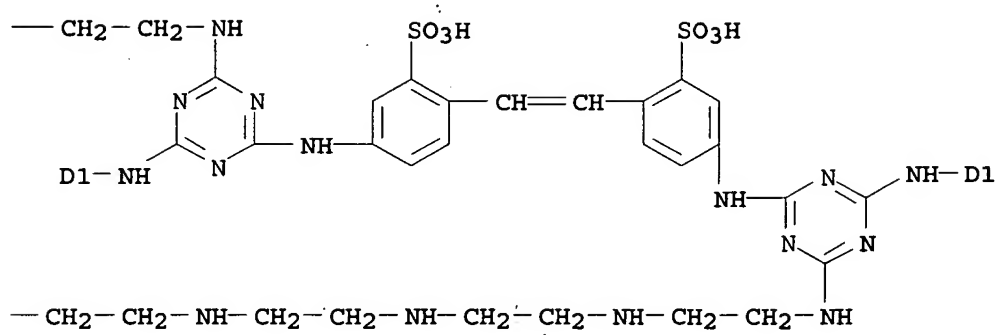
OS(=O)(=O)c1ccc(cc1)/N=N/c2ccc3c(c2)c(N=N/c4ccc(cc4)S(=O)(=O)O)c(O)c5cc(ccc35)S(=O)(=O)O



PAGE 2-A

D1-NH<sub>2</sub>

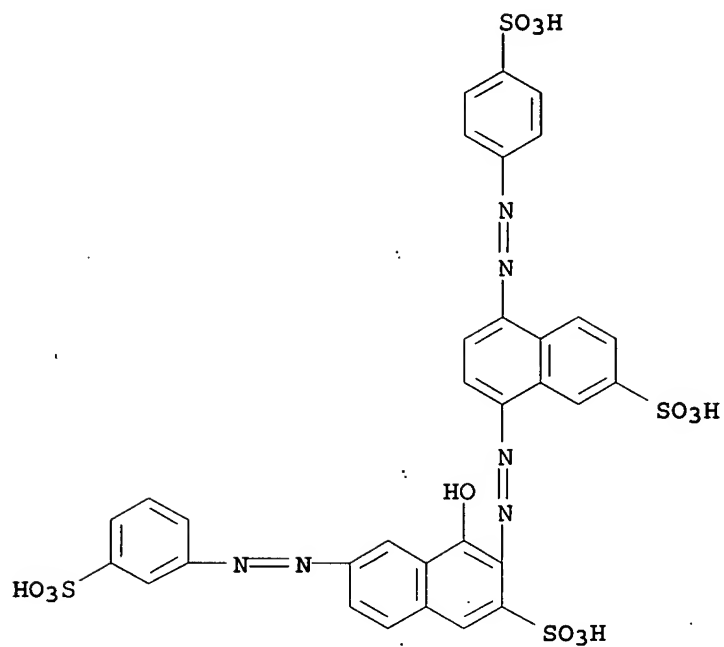
PAGE 2-B



RN 174661-77-9 HCAPLUS

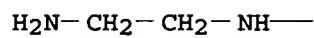
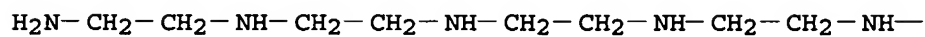
CN 2-Naphthalenesulfonic acid, 6,6'-[1,2-ethenediylbis[(3-sulfo-4,1-phenylene)imino[6-[(14-amino-3,6,9,12-tetraazatetradec-1-yl)amino]-1,3,5-triazine-4,2-diyl]imino(aminosulfo-phenylene)azo]]bis[4-hydroxy-3-[[7-sulfo-4-[(4-sulfo-phenyl)azo]-1-naphthalenyl]azo]- (9CI) (CA INDEX NAME)

PAGE 1-A

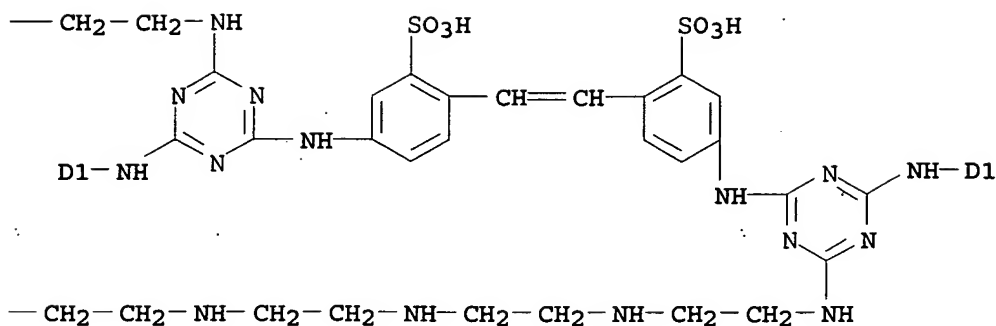


PAGE 2-A

1/2

D1-NH<sub>2</sub>

PAGE 2-B



IC ICM C09B043-00  
ICS C09B062-09; D06P001-02; C09D011-00  
ICA C09B031-18  
CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 42, 43  
IT 9002-98-6DP, Polyethylenimine, reaction products with cyanuric chloride condensates 174630-18-3P 174630-19-4P 174630-20-7P  
174630-21-8P 174630-22-9P 174630-23-0P 174630-24-1P  
174630-25-2P 174630-26-3P 174630-27-4P 174630-28-5P  
174630-29-6P 174661-69-9P 174661-70-2P 174661-71-3P  
174661-72-4P 174661-73-5P 174661-74-6P 174661-75-7P  
174661-76-8P 174661-77-9P 174661-78-0P 174661-79-1P  
174661-80-4P 174661-81-5P 174661-82-6P 174661-83-7P  
174661-84-8P 174661-85-9P 174689-29-3P 175413-62-4P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyazo black dyes for ink)

L37 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:938158 HCAPLUS

DOCUMENT NUMBER: 123:343358

TITLE: Dyes, inks containing them, and apparatus and methods for their use in ink-jet recording

INVENTOR(S): Nagashima, Akira; Tochiara, Shinichi; Noguchi, Hiromichi

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Eur. Pat. Appl., 50 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

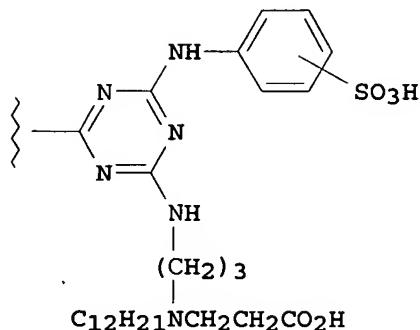
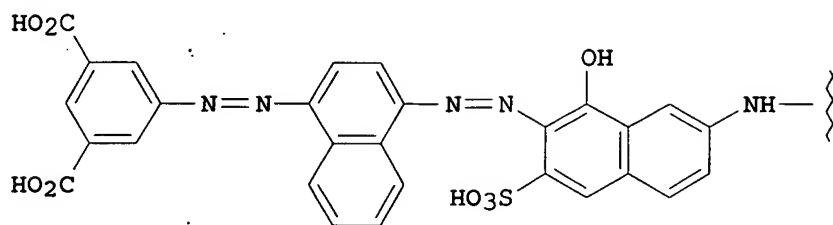
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 669381	A2	19950830	EP 1995-102509	19950222
EP 669381	A3	19970115		
EP 669381	B1	20020911		

R: CH, DE, ES, FR, GB, IT, LI, NL

US 5733363	A	19980331	US 1995-392261	199502 22
JP 07286113	A	19951031	JP 1995-63468	199502 28
JP 3754718	B2	20060315	JP 1994-52639	A 199402 28

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 123:343358  
GI



I

AB The dyes contain 1-12 acid groups and consist of 1-2 chromophores joined by 1-2 bi- or trivalent linking groups and/or 1 tetravalent linking group to 1-4 secondary or tertiary amine residues substituted with alkyl groups, CO<sub>2</sub>M, SO<sub>3</sub>M, and/or PO<sub>3</sub>MM<sub>1</sub> (M, M<sub>1</sub> = H, metal). Thus, I was prepared by conventional azo coupling and condensation steps and incorporated in an ink formulation with glycerol, thiodiglycol, ethoxylated acetylenic glycol surfactant, urea, NaOH, and water. Prints obtained by ink-jet printing with the formulation showed good waterfastness, frequency responsiveness, and kagation resistance, and excellent print sharpness.

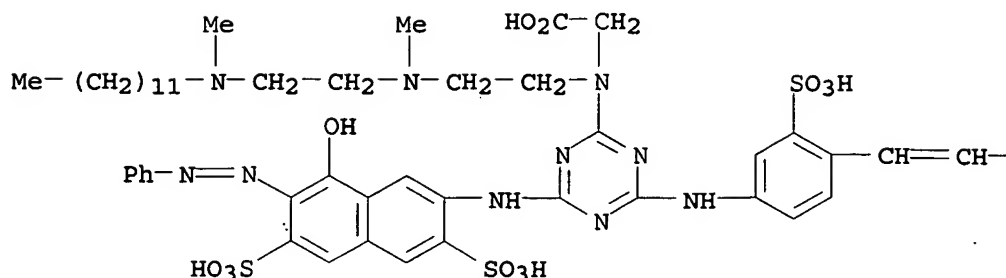
IT 170695-30-4

RL: TEM (Technical or engineered material use); USES (Uses)  
(jet-printing inks containing)

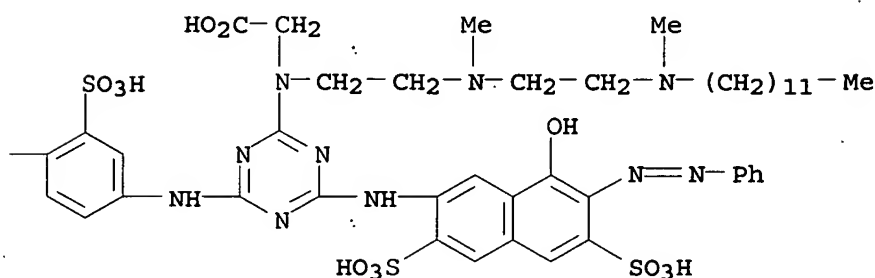
RN 170695-30-4 HCAPLUS

CN Glycine, N,N'-[1,2-ethenediylbis[(3-sulfo-4,1-phenylene)imino[6-[[8-hydroxy-7-(phenylazo)-3,6-disulfo-2-naphthalenyl]amino]-1,3,5-triazine-4,2-diyl]]]bis[2-[[2-(dodecylmethylamino)ethyl]methylamino]ethyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM C09B069-00  
 ICS C09B043-16; C09B047-26; C09B019-02; C09B001-34; C09D011-00;  
 B41J002-175; B41J002-01  
 CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 42  
 IT 147-14-8D, Copper phthalocyanine, sulfonated, (aminotriazinyl)amino  
 acid derivs. 170695-26-8 170695-27-9 170695-28-0 170695-29-1  
 170695-30-4 170695-31-5 170695-32-6 170695-33-7D,  
 reaction products with sulfonated copper phthalocyanine  
 170754-61-7 170893-72-8 170969-21-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (jet-printing inks containing)

L37 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:781837 HCAPLUS

DOCUMENT NUMBER: 123:172627

TITLE: Disazo and tetrakisazo dyes, their preparation and use

INVENTOR(S): Hassenrueck, Karin; Reinhardt, Karl-Heinz; Wild, Peter; Wunderlich, Klaus

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Ger. Offen., 29 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

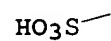
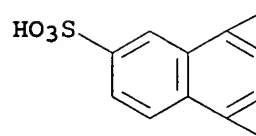
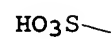
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

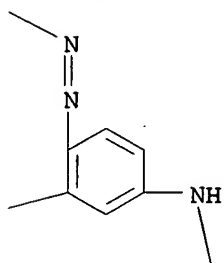
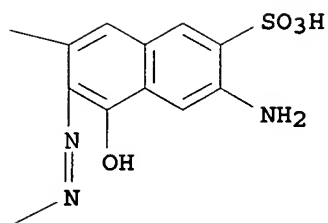
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	---	-----	---

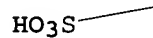
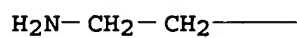


PAGE 1-A



PAGE 1-B



$$\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-$$
OS(=O)(=O)c1ccc(cc1)/N=N/c2ccc3ccccc3c2/N=N/c4c(O)c(N)cc(S(=O)(=O)O)c4



IC ICM C09B035-56  
 ICS C09B031-072; C09B056-04; C09B056-08; C09B043-136; C09B062-09;  
 C09B067-26; D06P001-39; D06P003-60; C09D011-00; C07C309-50;  
 C07C241-00  
 ICA D06P003-32; C07C309-46; C07C309-47; C07C245-12; C07D307-68  
 ICI C07D403-04; C07D251-54; C07D295-125  
 CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 42  
 IT 167489-45-4P 167489-46-5P 167489-47-6P 167489-48-7P  
 167489-49-8P 167489-50-1P 167489-51-2P 167489-52-3P  
 167489-53-4P 168758-96-1P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (preparation of black polyazo dyes for paper and for jet-printing  
 inks)

L37 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1970:426622 HCAPLUS  
 DOCUMENT NUMBER: 73:26622  
 TITLE: 4,4'-Bis(s-triazinylamino)-2,2'-  
 stilbenedisulfonate fluorescent whiteners  
 INVENTOR(S): Lebkuecher, Karl H.; Schnizel, Erich; Nichwitz,  
 Ehrenfried  
 PATENT ASSIGNEE(S): Farbwerke Hoechst A.-G.  
 SOURCE: Ger. Offen., 45 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
DE 1930307	A	19700212	DE 1969-1930307	196906 14
DE 1930307	B2	19780615		
DE 1930307	C3	19790315		
CH 525991	A	19720731	CH 1968-10953	196807 22
US 3663538	A	19720516	US 1969-839640	196907 07
NO 125051	B	19720710	NO 1969-2955	196907 15
GB 1274545	A	19720517	GB 1969-1274545	196907 16
AT 294751	B	19711210	AT 1969-6987	196907 21
SE 346539	B	19720710	SE 1969-10243	196907 21
DK 137755	B	19780501	DK 1969-3924	

196907  
21

DK 137755 C 19781009  
BE 736364 A 19700122 BE 1969-736364

196907  
22

NL 6911208 A 19700126 NL 1969-11208

196907  
22

FR 2013466 A5 19700403 FR 1969-24879

196907  
22

PRIORITY APPLN. INFO.: CH 1968-10953

A

196807  
22

GI For diagram(s), see printed CA Issue.

AB The title whiteners I useful for paper and cotton were prepared by quaternization of II. Thus, 38.1 parts 2,4HO<sub>3</sub>S(H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>CH:]<sub>2</sub> in aqueous NaOH was condensed with 36.7 parts cyanuric chloride in H<sub>2</sub>O-acetone followed by further condensation with 70 parts Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> and acidified (HCl) to give 88.5% II (Y = Y<sub>1</sub> = CH<sub>2</sub>CH<sub>2</sub>, R = R<sub>2</sub> = Et, R<sub>1</sub> = H) (III). Similarly prepared were II (Y, Y<sub>1</sub>, R-R<sub>2</sub> given): (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Et, H, Et; (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Bu, H, Bu; MeCH(CH<sub>2</sub>)<sub>3</sub>, MeCH(CH<sub>2</sub>)<sub>3</sub>, Et, H, Et; m-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>CH<sub>2</sub>, Me, H, Et; p-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>CH<sub>2</sub>, Et, H, Et; m-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>CH<sub>2</sub>, Me, Me, Et; p-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>CH<sub>2</sub>, Et, Me, Et; p-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>CH<sub>2</sub>, Me, Me, Et; (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Et; p-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Bu; m-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Et; m-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Bu; (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, (RR=) O(CH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>, H, (R<sub>2</sub>R<sub>2</sub>=) O(CH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>; m-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, H, (R<sub>2</sub>R<sub>2</sub>=) O(CH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>; m-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, (R<sub>2</sub>R<sub>2</sub>=) O(CH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>; (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, (RR=) (CH<sub>2</sub>)<sub>5</sub>, H, (R<sub>2</sub>R<sub>2</sub>=) (CH<sub>2</sub>)<sub>5</sub>; m-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, H, (R<sub>2</sub>R<sub>2</sub>=) (CH<sub>2</sub>)<sub>5</sub>; m-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, (R<sub>2</sub>R<sub>2</sub>=) (CH<sub>2</sub>)<sub>5</sub>; CH<sub>2</sub>CH(OH)CH<sub>2</sub>, CH<sub>2</sub>CH(OH)CH<sub>2</sub>, Et, H, Et; m-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>(OH)CH<sub>2</sub>, Me, H, Et; m-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>CH(OH)CH<sub>2</sub>, Me, Me, Et; (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Ph and Me, H, Et; (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Ph and Me, Me, Et; m-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Ph and H; m-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Ph, Me; 6-Me-m-C<sub>6</sub>H<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, H, Et; 6-Me-m-C<sub>6</sub>H<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Et; 4-Me-m-C<sub>6</sub>H<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, H, Et; 4-Me-m-C<sub>6</sub>H<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Et; 4-Me-m-C<sub>6</sub>H<sub>3</sub>, 4-Me-m-C<sub>6</sub>H<sub>3</sub>, Me, H, Me; 3-Cl-p-C<sub>6</sub>H<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, H, Et; 3-Cl-p-C<sub>6</sub>H<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Et. III was quaternized with HCl, Me<sub>2</sub>SO<sub>4</sub>, and p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Me to give I (Y = Y<sub>1</sub> = CH<sub>2</sub>CH<sub>2</sub>, R = R<sub>2</sub> = H, R<sub>1</sub> = R<sub>3</sub> = Et, X = Cl, MeSO<sub>4</sub>, p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>), resp. Similarly prepared were I (Y, Y<sub>1</sub>, R-R<sub>3</sub>, and X given): (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, H, Et, H, Et, HCO<sub>2</sub>; (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Et, Me, Et, MeSO<sub>4</sub>; (CH<sub>2</sub>)<sub>3</sub>, (CH<sub>2</sub>)<sub>3</sub>, H, Bu, H, Bu, HCO<sub>2</sub>; MeCH(CH<sub>2</sub>)<sub>3</sub>, MeCH(CH<sub>2</sub>)<sub>3</sub>, H, Et, H, Et, HCO<sub>2</sub>; CH<sub>2</sub>CH<sub>2</sub>, m-C<sub>6</sub>H<sub>4</sub>, Me, Et, Me, Me, Cl; CH<sub>2</sub>CH<sub>2</sub>, p-C<sub>6</sub>H<sub>4</sub>, Me, Et, Me, Et, Cl; CH<sub>2</sub>CH<sub>2</sub>, m-C<sub>6</sub>H<sub>4</sub>, Me, Et, Me, Me, MeSO<sub>4</sub>; CH<sub>2</sub>CH<sub>2</sub>, p-C<sub>6</sub>H<sub>4</sub>, Me, Et, Me, Et, MeSO<sub>4</sub>; p-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>CH<sub>2</sub>, Me, Me, Me, Et, MeSO<sub>4</sub>; p-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, Me, Me, Me, Et, MeSO<sub>4</sub>; p-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, PhCH<sub>2</sub>, Me, Me, Bu, Cl; p-C<sub>6</sub>H<sub>4</sub>, (CH<sub>2</sub>)<sub>3</sub>, PhCH<sub>2</sub>, Me, Me, Et, Cl.

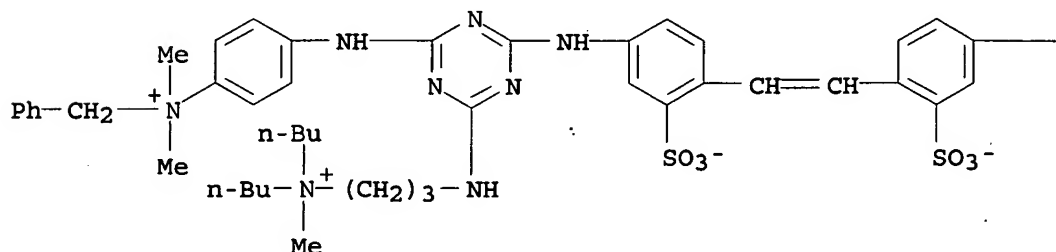
IT 28053-38-5P 28053-39-6P 28053-79-4P  
28053-80-7P 28053-81-8P 28053-82-9P  
28092-17-3P 28092-18-4P 28092-19-5P  
28092-20-8P 28092-21-9P 28094-20-4P  
28094-21-5P 28094-22-6P 28094-23-7P  
28094-24-8P 28094-64-6P 28097-34-9P  
28097-35-0P 28097-36-1P 28097-37-2P  
28143-52-4P 28143-53-5P 28270-25-9P  
28270-49-7P 28270-51-1P 31858-19-2P  
31858-20-5P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)

RN 28053-38-5 HCAPLUS

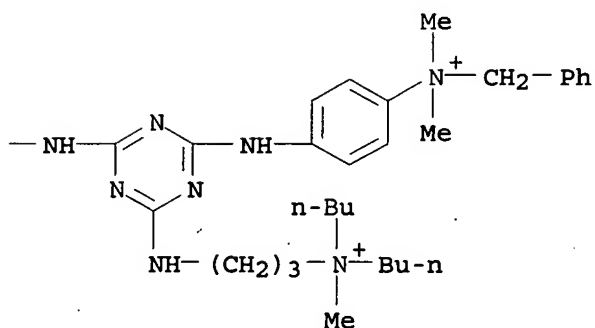
CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(benzyltrimethylammonio)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[dibutylmethyl-, dihydroxide, bis(inner salt), dichloride (8CI) (CA INDEX NAME)

PAGE 1-A



● 2 Cl<sup>-</sup>

PAGE 1-B



RN 28053-39-6 HCAPLUS

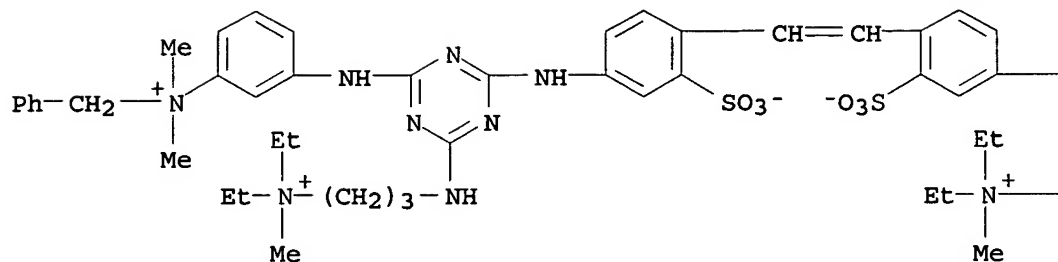
CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[m-(benzyltrimethylammonio)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt), bis(methyl sulfate) (8CI) (CA INDEX NAME)

CM 1

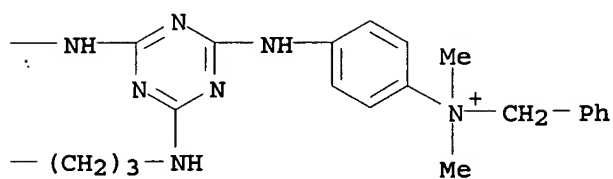
CRN 47926-10-3

CMF C66 H86 N16 O6 S2

PAGE 1-A



PAGE 1-B



CM 2

CRN 21228-90-0

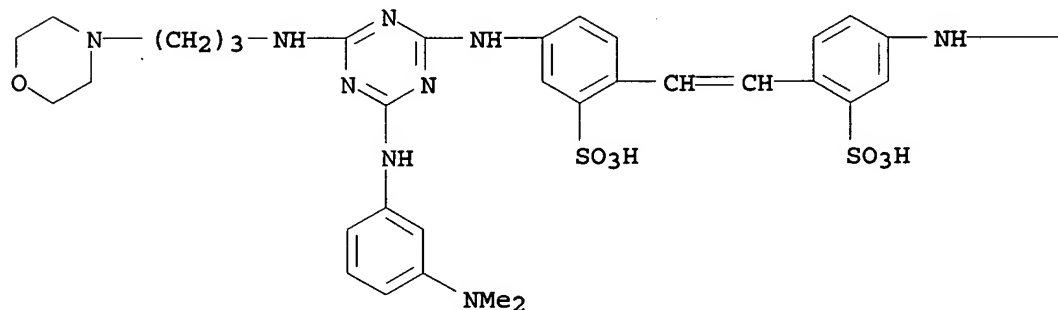
CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

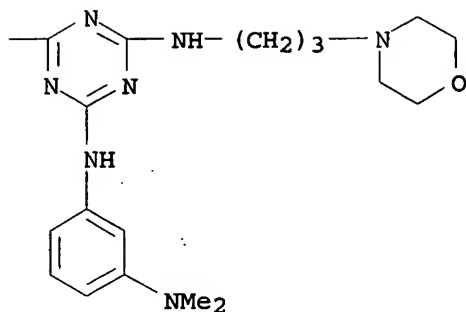
RN 28053-79-4 HCAPLUS

CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[m-(dimethylamino)anilino]-6-[(3-morpholinopropyl)amino]-s-triazin-2-yl]amino]-(8CI) (CA INDEX NAME)

PAGE 1-A



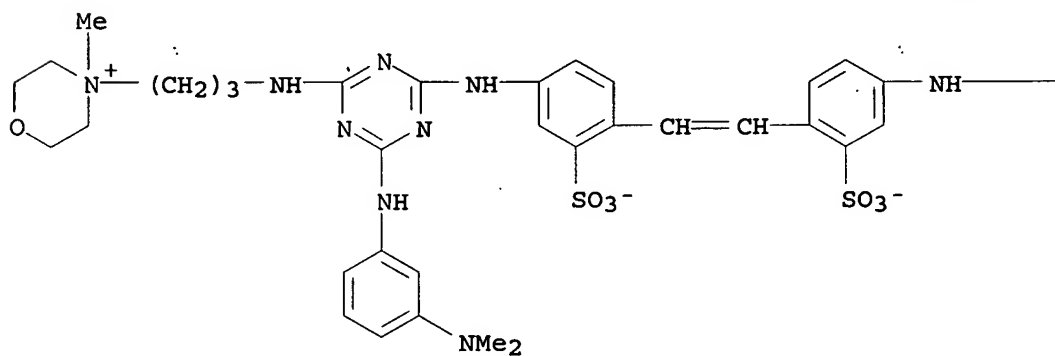
PAGE 1-B



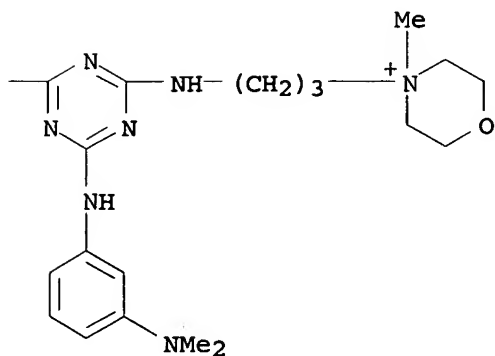
RN 28053-80-7 HCAPLUS

CN Morpholinium, 4,4'-[vinylenebis[(3-sulfo-p-phenylene)imino[6-[m-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[4-methyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

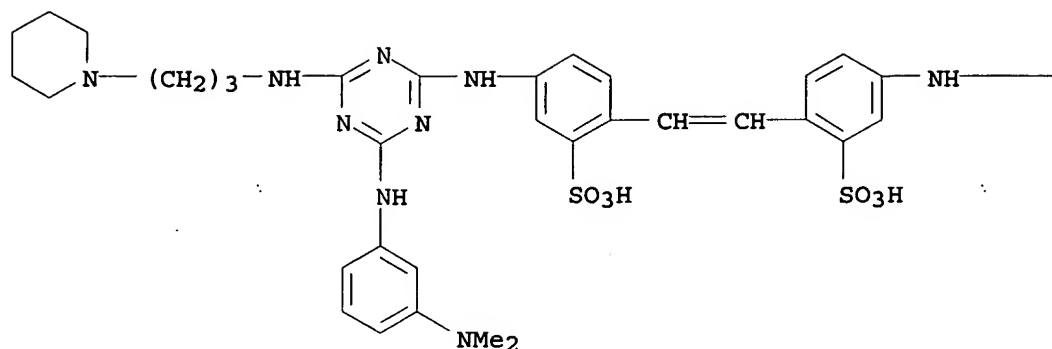


RN 28053-81-8 HCAPLUS

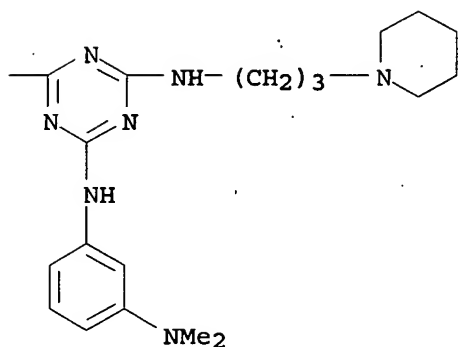
CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[m-(dimethylamino)anilino]-6-[(3-piperidinopropyl)amino]-s-triazin-2-yl]amino]- (8CI) (CA

INDEX NAME)

PAGE 1-A

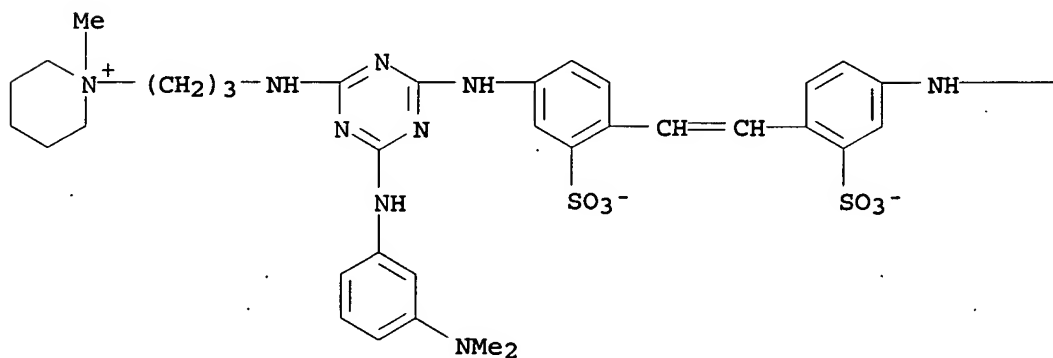


PAGE 1-B

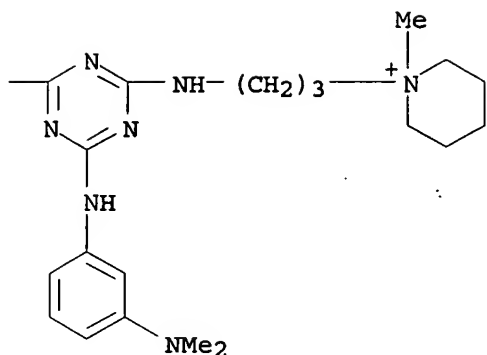


RN 28053-82-9 HCAPLUS  
 CN Piperidinium, 1,1'-[vinylenebis[(3-sulfo-p-phenylene)imino[6-[m-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[1-methyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A



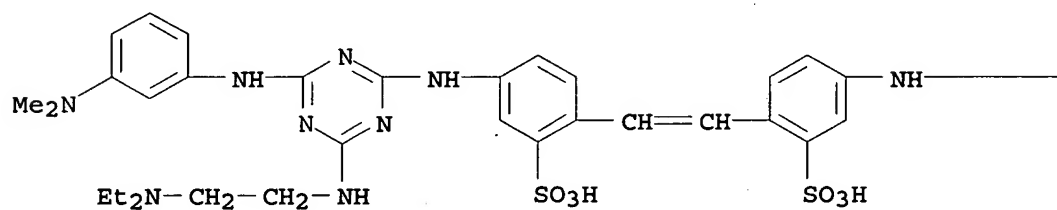
PAGE 1-B



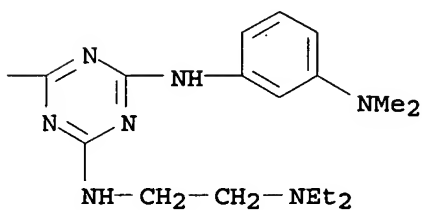
RN 28092-17-3 HCAPLUS

CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[[2-(diethylamino)ethyl]amino]-6-[m-(dimethylamino)anilino]-s-triazin-2-yl]amino]- (8CI) (CA INDEX NAME)

PAGE 1-A



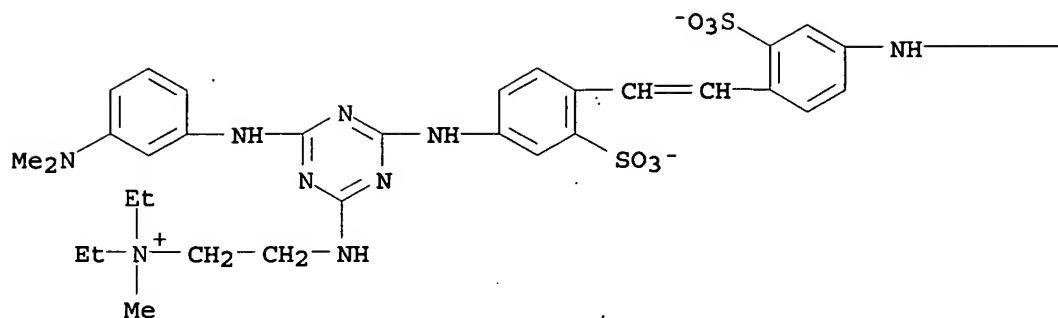
PAGE 1-B



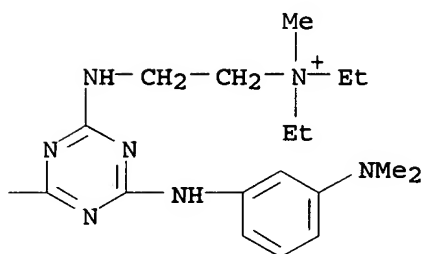
RN 28092-18-4 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[m-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminoethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

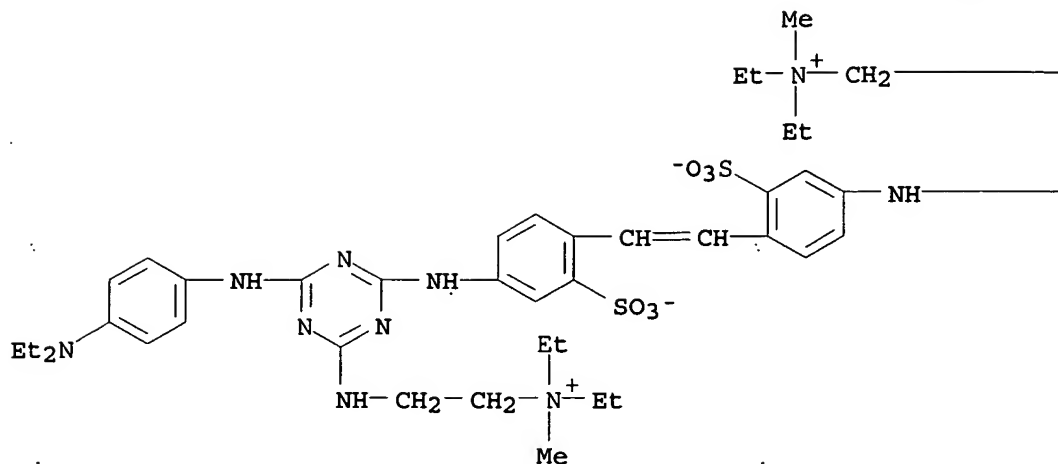


RN 28092-19-5 HCAPLUS

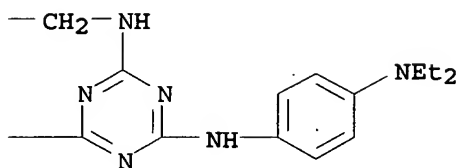
CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(diethylamino)anilino]-s-triazine-4,2-diyl]iminoethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)



PAGE 1-A

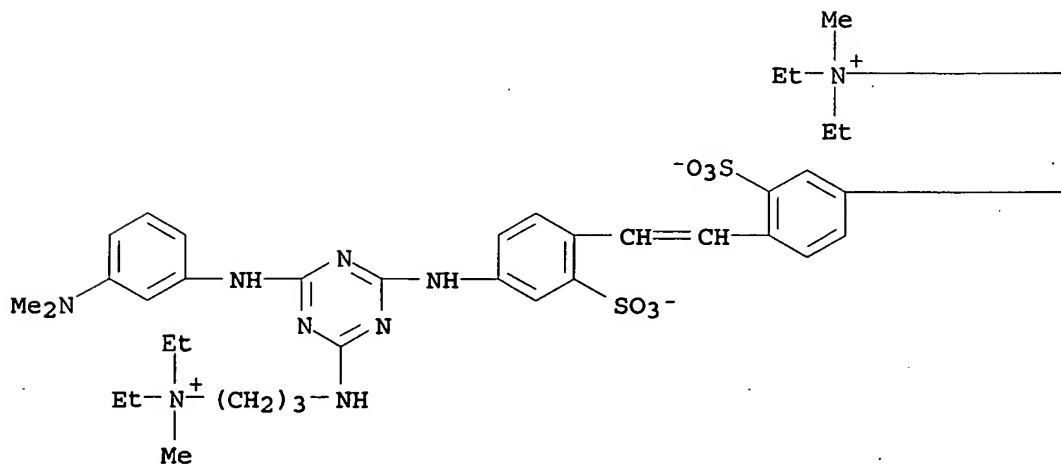


PAGE 1-B

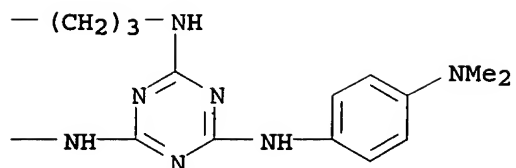


RN 28092-20-8 HCAPLUS  
 CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[d iethylmethyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

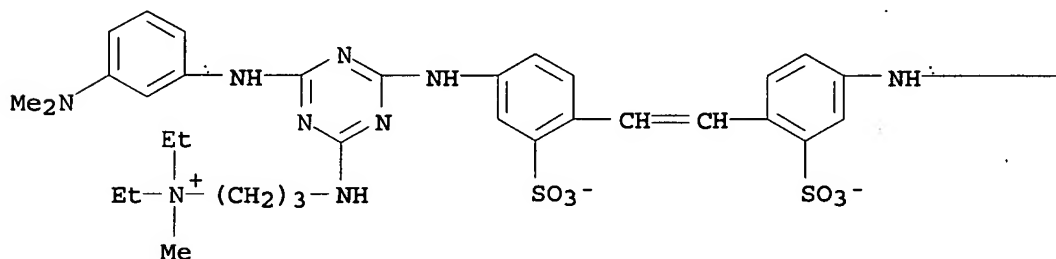


X

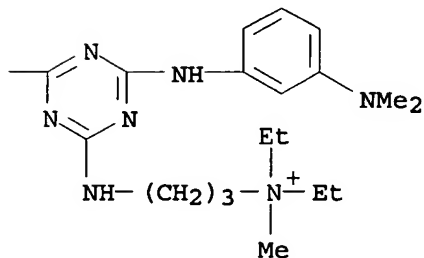
RN 28092-21-9 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[m-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[d iethylmethyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

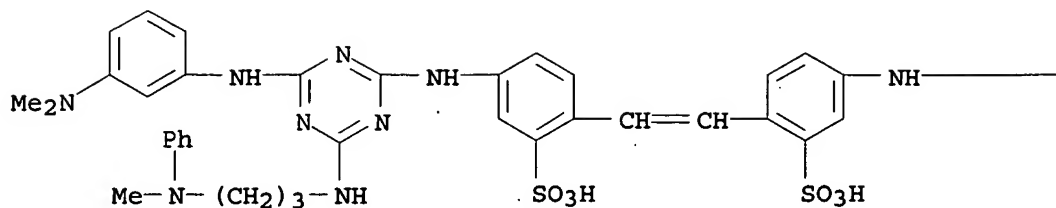


X

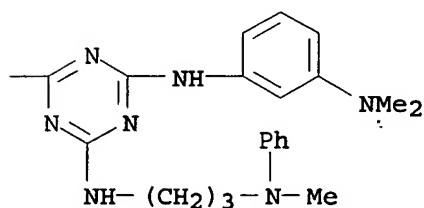
RN 28094-20-4 HCAPLUS

CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[m-(dimethylamino)anilino]-6-[[3-(N-methylanilino)propyl]amino]-s-triazin-2-yl]amino]- (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

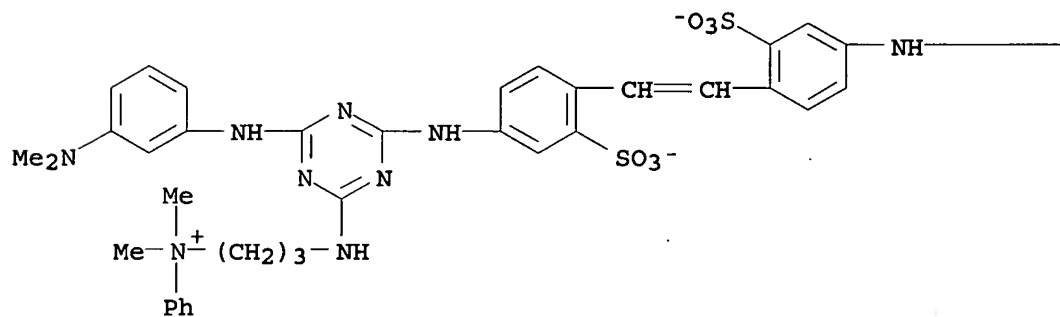


X

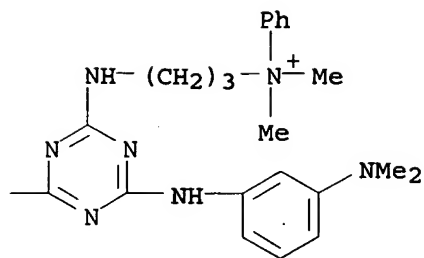
RN 28094-21-5 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[m-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[dimethylphenyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A



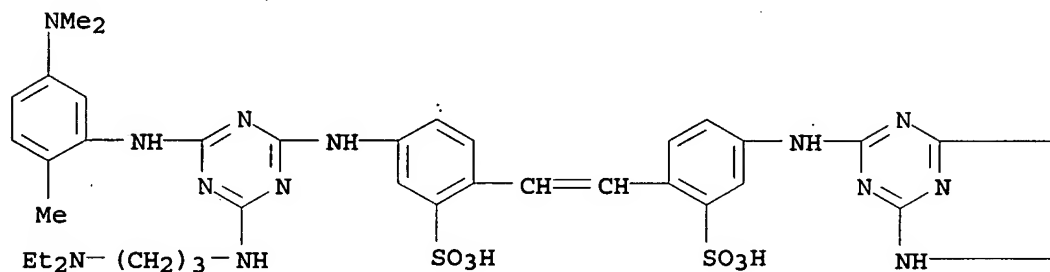
PAGE 1-B



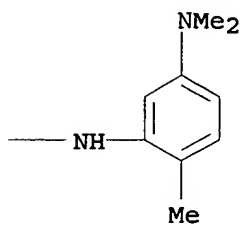
RN 28094-22-6 HCAPLUS

CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[[3-(diethylamino)propyl]amino]-6-[5-(dimethylamino)-o-toluidino]-s-triazin-2-yl]amino]-(8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

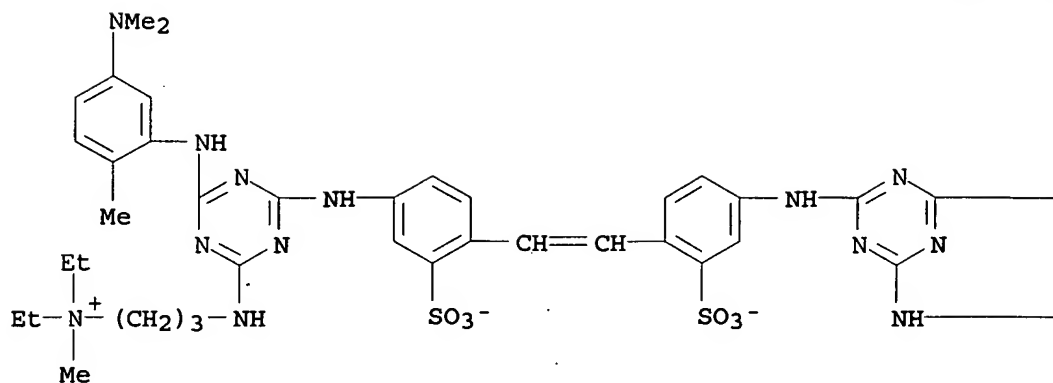


— (CH<sub>2</sub>)<sub>3</sub>—NEt<sub>2</sub>

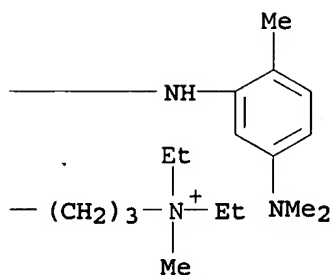
RN 28094-23-7 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[5-(dimethylamino)-o-toluidino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt)] (8CI) (CA INDEX NAME)

PAGE 1-A



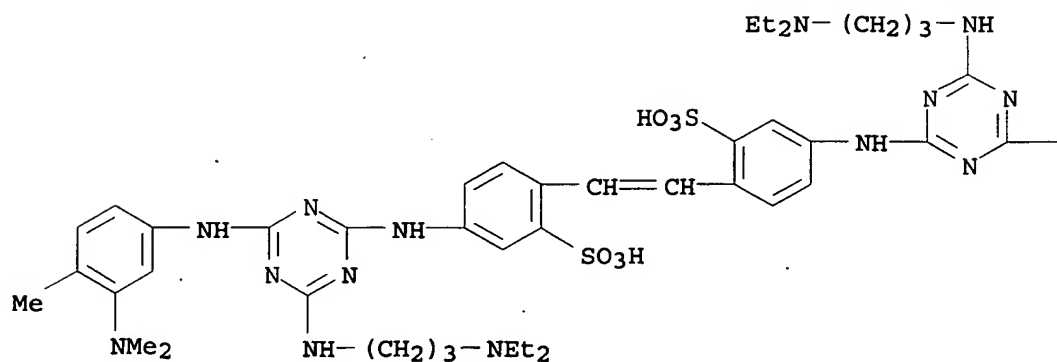
PAGE 1-B



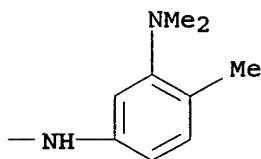
RN 28094-24-8 HCAPLUS

CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[[3-(diethylamino)propyl]amino]-6-[3-(dimethylamino)-p-toluidino]-s-triazin-2-yl]amino]-(8CI) (CA INDEX NAME)

PAGE 1-A



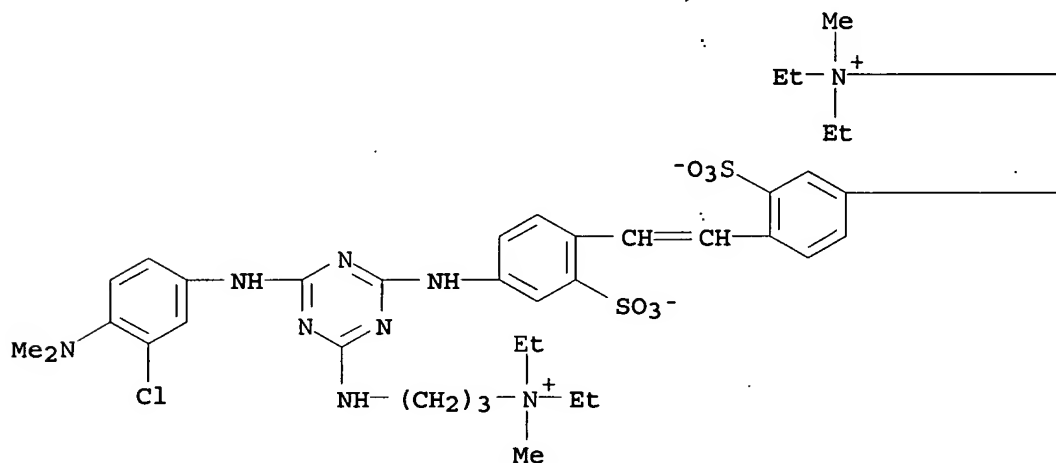
PAGE 1-B



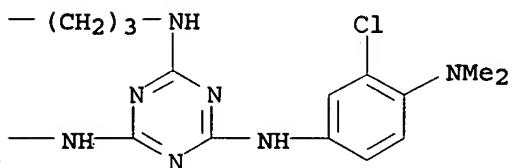
RN 28094-64-6 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[3-chloro-4-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[d iethylmethyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

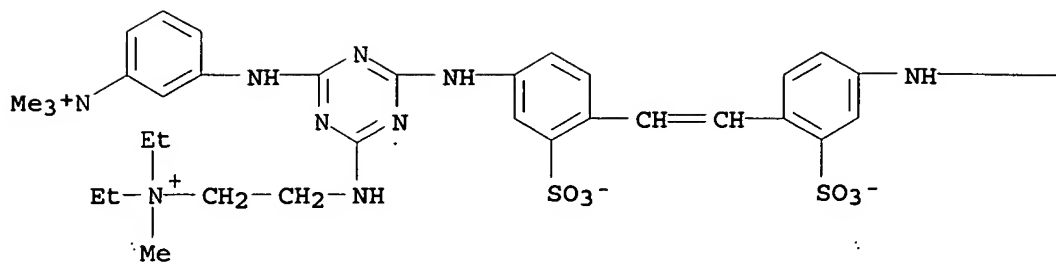


RN 28097-34-9 HCAPLUS

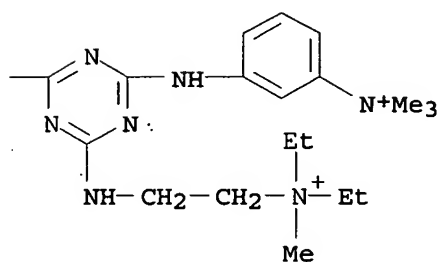
CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[m-(trimethylammonio)anilino]-s-triazine-4,2-diyl]iminoethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt), dichloride (8CI) (CA INDEX NAME)

X

PAGE 1-A

● 2 Cl<sup>-</sup>

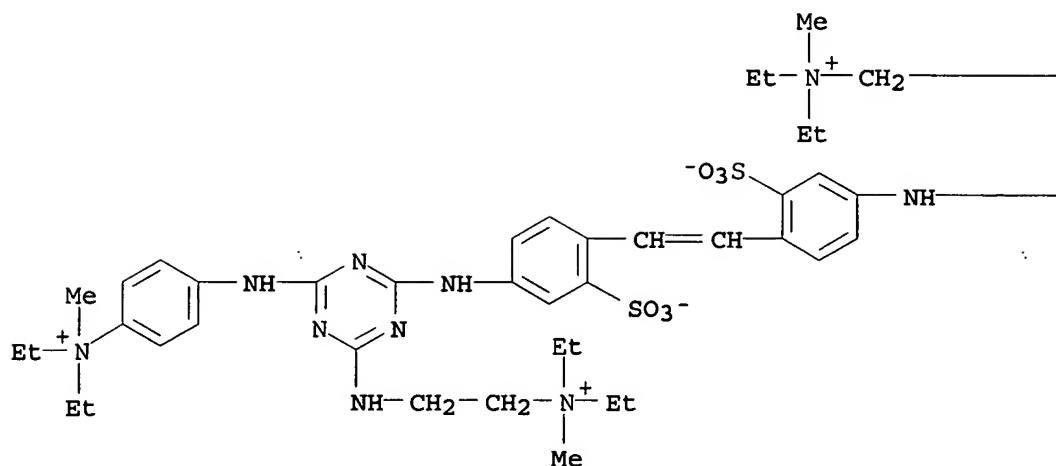
PAGE 1-B



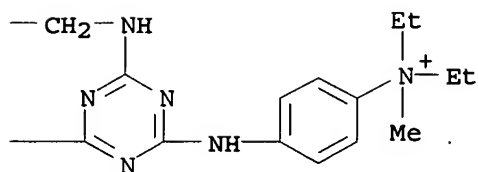
RN 28097-35-0 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(diethylmethylammonio)anilino]-s-triazine-4,2-diyl]iminoethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt), dichloride (8Cl) (CA INDEX NAME)

PAGE 1-A

● 2 Cl<sup>-</sup>

PAGE 1-B



RN 28097-36-1 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[m-(trimethylammonio)anilino]-s-triazine-4,2-diyl]iminoethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt), bis(methyl sulfate) (8CI) (CA INDEX NAME)

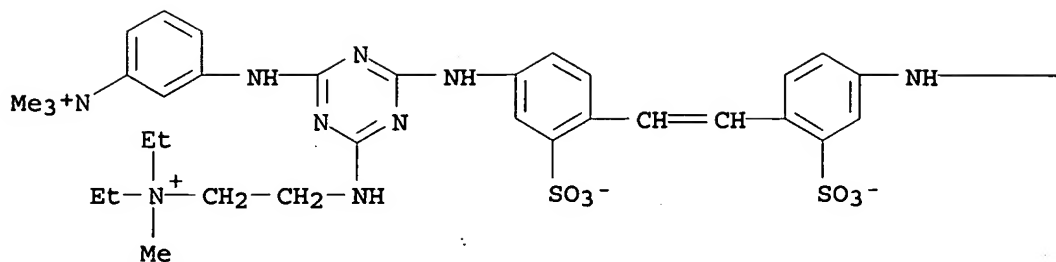
CM 1

CRN 50570-72-4

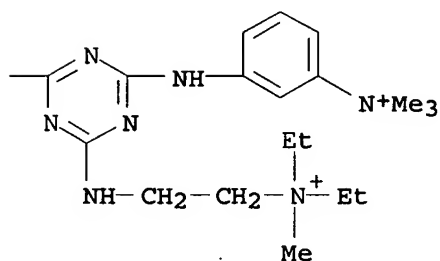
CMF C52 H74 N16 O6 S2



PAGE 1-A



PAGE 1-B



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

RN 28097-37-2 HCAPLUS

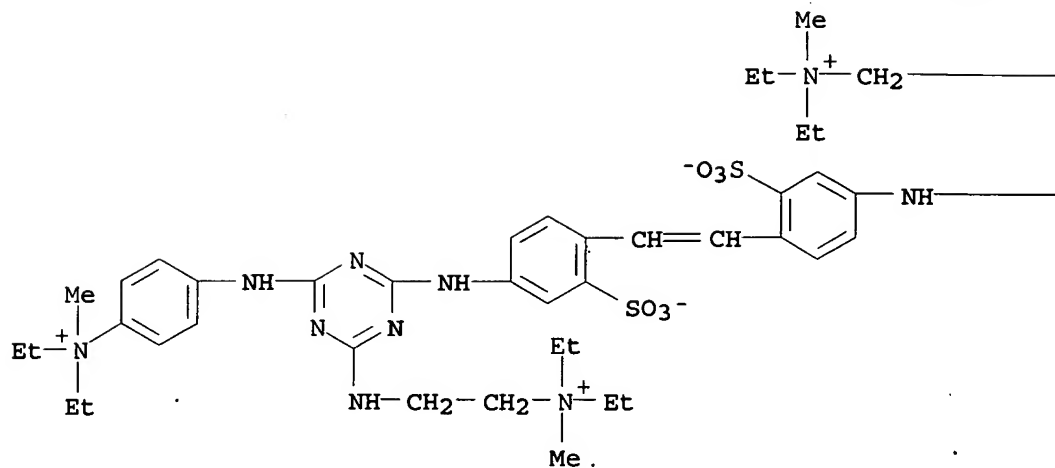
CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(diethylmethylammonio)anilino]-s-triazine-4,2-diyl]iminoethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt), bis(methyl sulfate) (8CI) (CA INDEX NAME)

CM 1

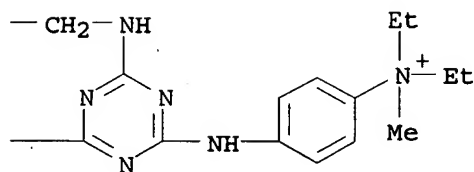
CRN 50570-77-9

CMF C56 H82 N16 O6 S2

PAGE 1-A



PAGE 1-B



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

RN 28143-52-4 HCAPLUS

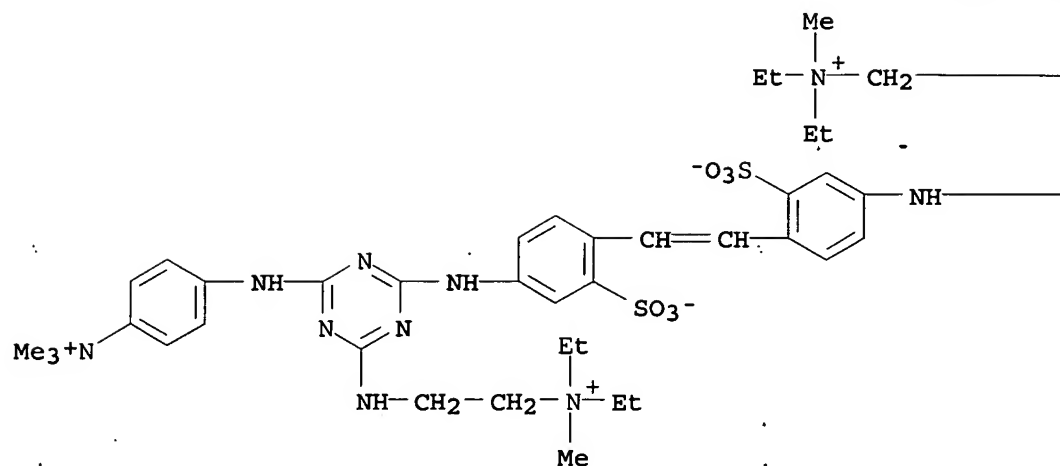
CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(trimethylammonio)anilino]-s-triazine-4,2-diyl]iminoethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt), bis(methyl sulfate) (8CI) (CA INDEX NAME)

CM 1

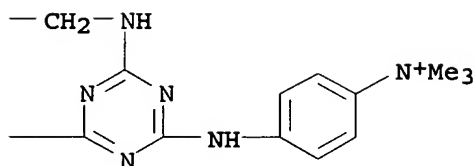
CRN 47917-92-0

CMF C52 H74 N16 O6 S2

PAGE 1-A



PAGE 1-B



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO3-

RN 28143-53-5 HCAPLUS

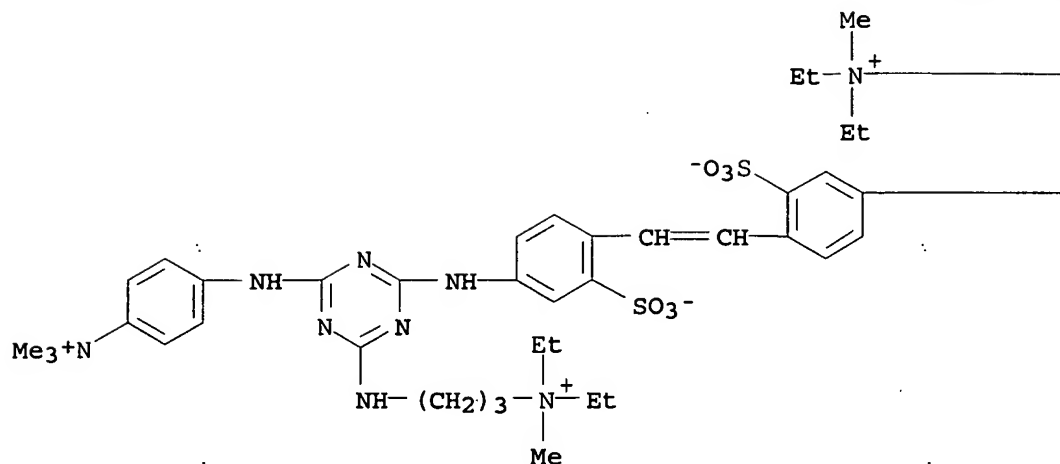
CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(trimethylammonio)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt), bis(methyl sulfate) (8CI) (CA INDEX NAME)

CM 1

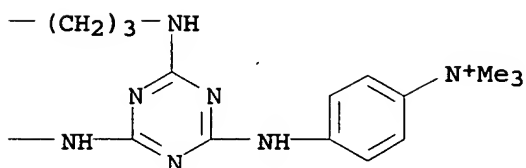
CRN 50570-76-8

CMF C54 H78 N16 O6 S2

PAGE 1-A



PAGE 1-B



CM 2

CRN 21228-90-0

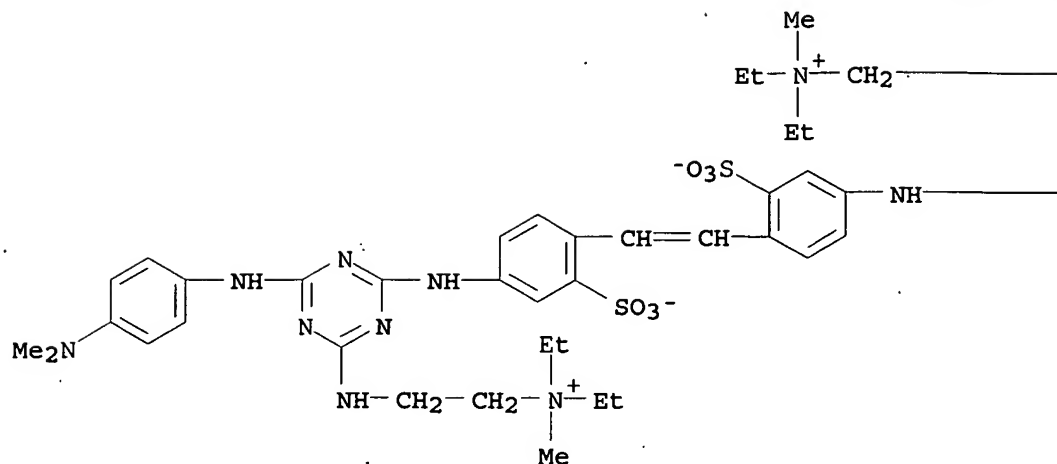
CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

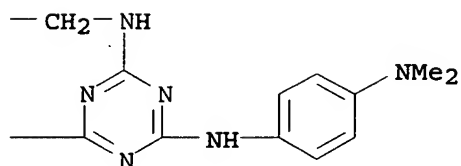
RN 28270-25-9 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminoethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A

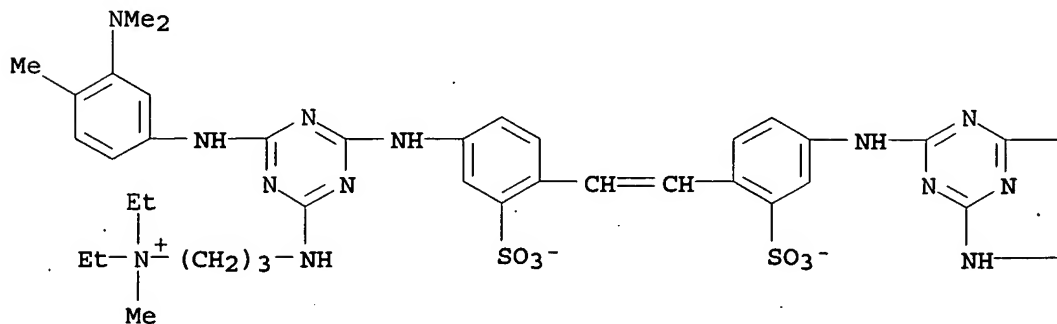


PAGE 1-B

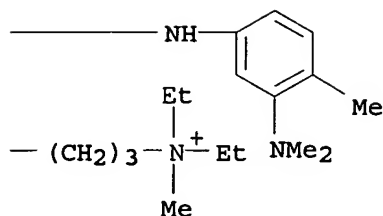


RN 28270-49-7 HCAPLUS  
 CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[3-(dimethylamino)-p-toluidino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[diethylmethyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)]

PAGE 1-A



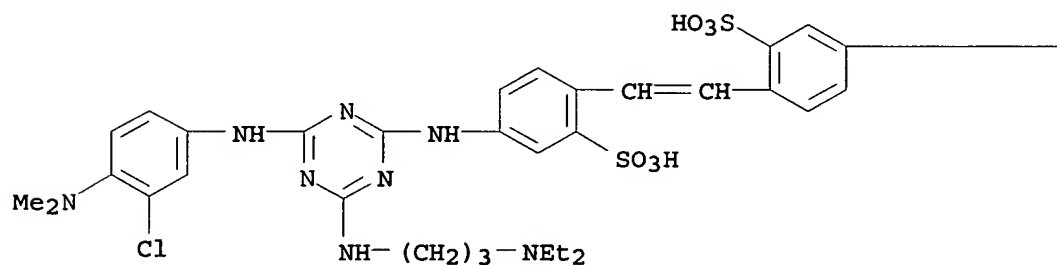
PAGE 1-B



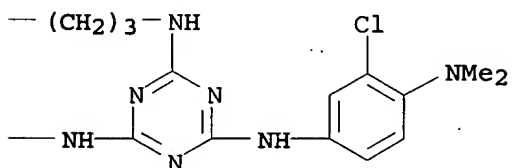
RN 28270-51-1 HCAPLUS

CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[3-chloro-4-(dimethylamino)anilino]-6-[[3-(diethylamino)propyl]amino]-s-triazin-2-yl]amino] - (8CI) (CA INDEX NAME)

PAGE 1-A

Et<sub>2</sub>N—

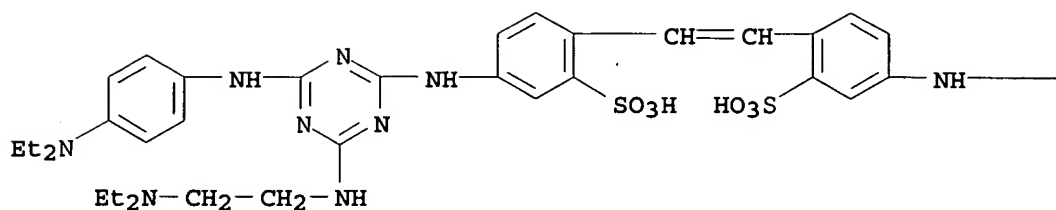
PAGE 1-B



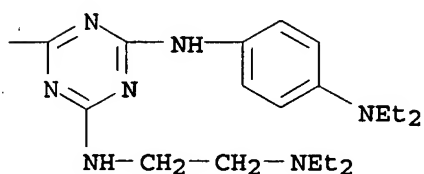
RN 31858-19-2 HCAPLUS

CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[p-(diethylamino)anilino]-6-[[2-(diethylamino)ethyl]amino]-s-triazin-2-yl]amino] - (8CI) (CA INDEX NAME)

PAGE 1-A



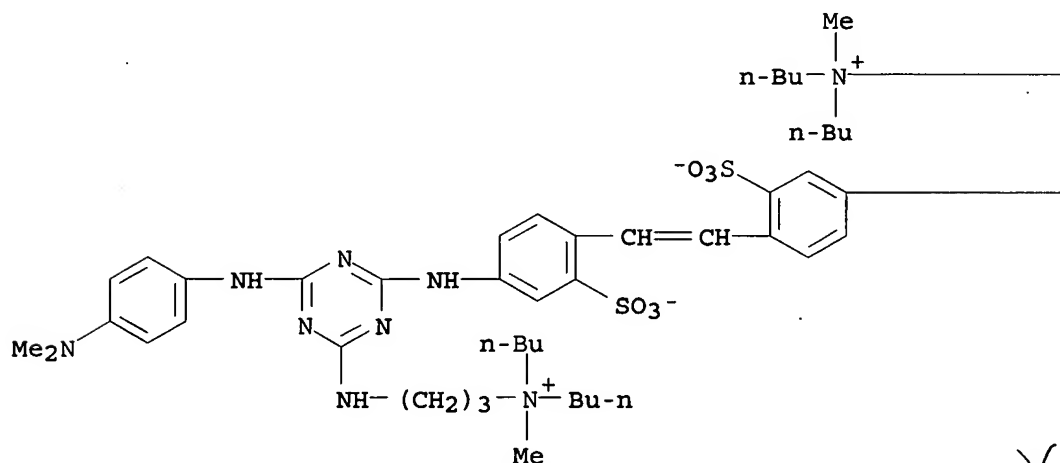
PAGE 1-B



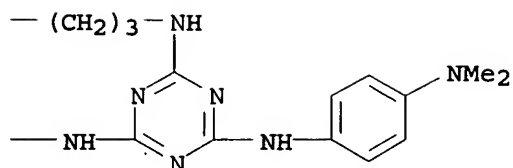
RN 31858-20-5 HCAPLUS

CN Ammonium, [vinylenebis[(3-sulfo-p-phenylene)imino[6-[p-(dimethylamino)anilino]-s-triazine-4,2-diyl]iminotrimethylene]]bis[dibutylmethyl-, dihydroxide, bis(inner salt) (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC C07D; D06L  
 CC 40 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 IT 25864-73-7P 28053-38-5P 28053-39-6P  
 28053-79-4P 28053-80-7P 28053-81-8P  
 28053-82-9P 28089-71-6P 28089-72-7P 28092-15-1P  
 28092-16-2P 28092-17-3P 28092-18-4P  
 28092-19-5P 28092-20-8P 28092-21-9P  
 28094-16-8P 28094-17-9P 28094-18-0P 28094-19-1P  
 28094-20-4P 28094-21-5P 28094-22-6P  
 28094-23-7P 28094-24-8P 28094-64-6P  
 28097-31-6P 28097-32-7P 28097-33-8P 28097-34-9P  
 28097-35-0P 28097-36-1P 28097-37-2P  
 28143-52-4P 28143-53-5P 28143-73-9P  
 28270-25-9P 28270-48-6P 28270-49-7P  
 28270-50-0P 28270-51-1P 28273-87-2P 28425-76-5P  
 29519-10-6P 29519-11-7P 31858-19-2P 31858-20-5P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of)

L37 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1969:38907 HCAPLUS  
 DOCUMENT NUMBER: 70:38907  
 TITLE: Substituted 4,4'-bis(triazinylamino)stilbenes  
 PATENT ASSIGNEE(S): Geigy, J. R., A.-G.  
 SOURCE: Brit., 6 pp.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1129548		19681009	GB 1967-29800	196706 28
CH 474601			CH	
FR 1529366			FR	
US 3546218		19701208	US	196606 29
US 3676339		19720711	US	197004 16
PRIORITY APPLN. INFO.:			US	196606 29



GI For diagram(s), see printed CA Issue.

AB I, where X is Y(CH<sub>2</sub>)<sub>3</sub>NH (Q), are fluorescent whitening agents. Thus, 71 g. (HOCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> (II) was added with stirring to a slurry of 150 g. I (X = Cl, R = H) (III) in 1200 ml. H<sub>2</sub>O, the mixture heated to 90°, the pH, which decreased to 9.5-10, maintained at 10.5-11 by adding 16 g. 50% NaOH, the mixture cooled to room temperature, the mother liquor decanted, 1200 ml. H<sub>2</sub>O and 300 g. NaCl added, the solids ground in a wet slurry with 400 ml. 25% aqueous NaCl, acidified to pH 2 with 37% HCl, filtered, washed acid-free and vacuum-dried to give 120 g. light yellow I [X = Q, Y = (HOCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>N (Z), R = H]. Similarly, other I (X = Q) were prepared (Y and R given): Z, SO<sub>3</sub>H; Me<sub>2</sub>N, H; morpholino, NMeCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, H.

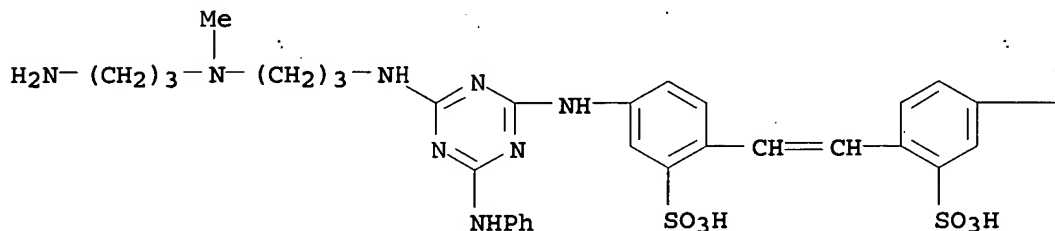
IT 20982-10-9P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)

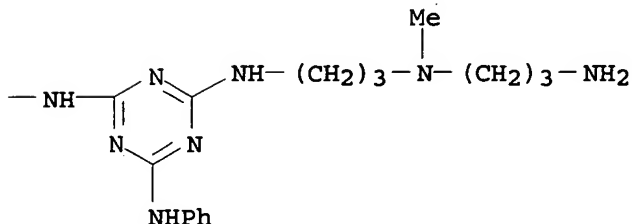
RN 20982-10-9 HCAPLUS

CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[[3-[(3-aminopropyl)methylamino]propyl]amino]-6-anilino-s-triazin-2-yl]amino]- (8CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC C07D

CC 40 (Dyes, Fluorescent Brightening Agents, and Photosensitizers)

IT 19523-47-8P 19523-49-0P 19643-44-8P 20982-06-3P

20982-10-9P 22301-97-9P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)

=>